3R - 231

REPORTS

DATE:

2002

elpaso Field Services

Certified Mail: #7001 1940 0002 1371 7676

February 28, 2003

Mr. William C. Olson
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

RE: 2002 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

EPFS has organized the 30 Annual Reports (Volumes 1, 2 and 3) by land type. Volume 1 contains Annual Reports for sites found on Federal land. Volume 2 contains Non Federal sites and Volume 3 contains sites on Navajo land. Of the 30 reports submitted, EPFS is requesting closure of three sites located on Navajo lands. Of the three Navajo sites submitted for closure OCD has closed the Charley Pah #4 and the John Charles #8. The Rementa et al #1 has not been closed by either agency and EPFS reiterates request for closure of this site. EPFS understands closure of groundwater sites on Navajo land falls under jurisdiction of the Navajo Nation Environmental Protection Agency and original documents have been submitted to them for review. Other Navajo sites are included in the report for your information.

Three additional sites were submitted for closure in 2002. EPFS recently has received closure on the W.D. Heath B-5. Closure approval is pending on the D Loop Line Drip and Hammond # 41A. All of these sites are included in the 2002 Annual Report.

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

Sincerely,

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7001 1940 0002 1371 7669**
Mr. Bill Liesse, BLM – w / enclosures (federal sites only), **Certified Mail # 7001 1940 0002 1371 7652**

El Paso Field Services
614 Reilly Farmington, New Mexico 87401

elpaso

El Paso Field Services

San Juan Basin Pit Program Groundwater Sites Project

2002 Annual Report Navajo Sites (Volume 3)

March 2003

MWH
10619 South Jordan Gateway, Suite 100
Salt Lake City, Utah 84095

EL PASO FIELD SERVICES ANNUAL GROUNDWATER REPORT

NAVAJO SITES VOLUME III

TABLE OF CONTENTS

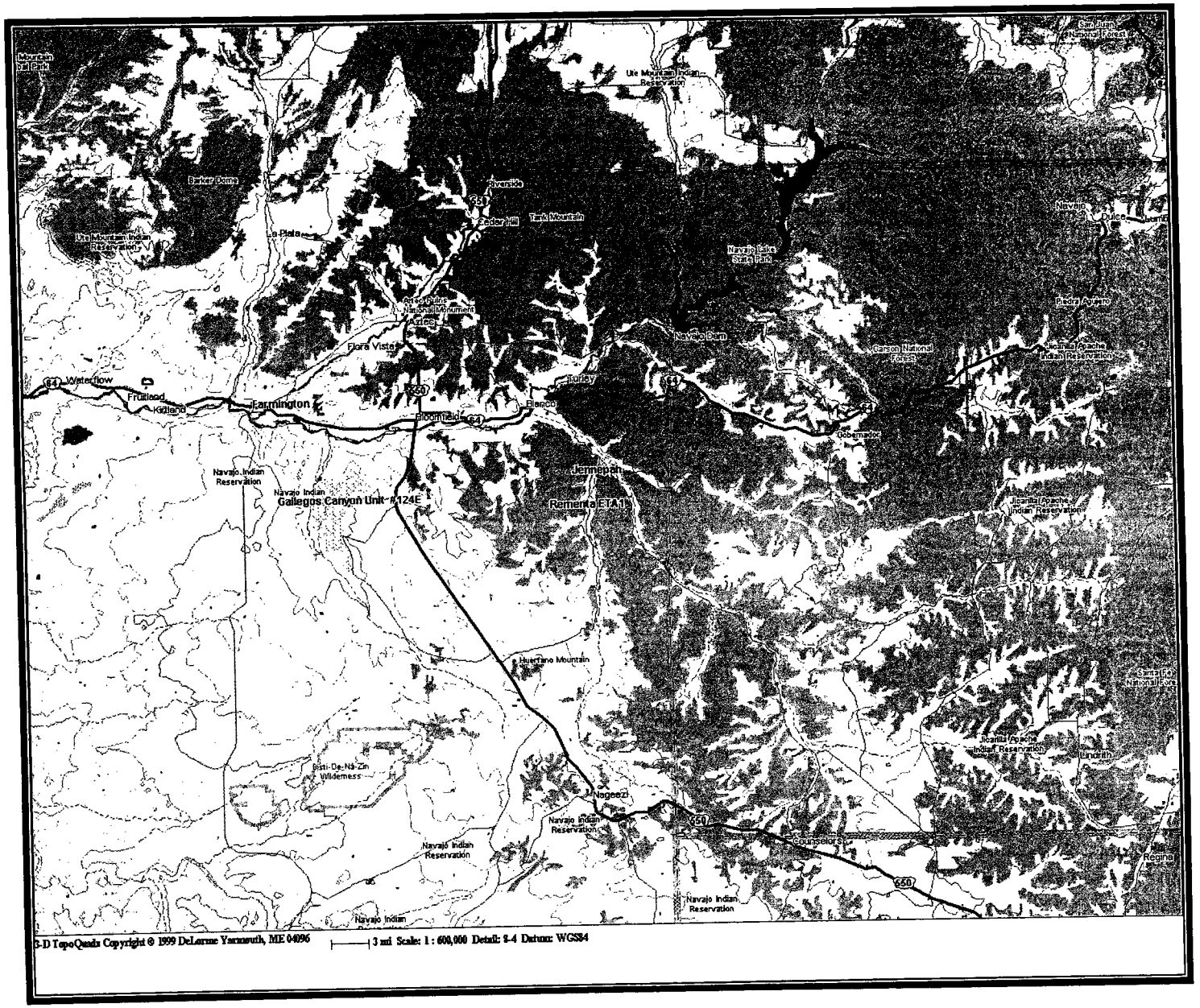
Site Map

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
71816	Jennepah #1	28N	09W	36	H
95608	Gallegos Canyon Unit #124E	28N	12W	35	N
93126	John Charles #8	27N	09W	13	B
75155	Ramenta et al #1	27N	09W	13	J
71531	Charley Pah #4	27N	09W	12	K

elpaso

MWH
MONTGOMERY WATSON HARZA

Navajo Groundwater Site Map



ACRONYMS

B	Benzene
E	Ethylbenzene
EPFS	El Paso Field Services
ft	foot/feet
GWEL	groundwater elevation
ID	identifier
MW	Monitoring Well
PSH	Phase Separated Hydrocarbons
NMWQCC	New Mexico Water Quality Control Commission
T	Toluene
TOC	Top Of Casing
NE	not establihed
NS	not sampled
ORC	oxygen release compound
OCD	Oil Conservation Division
ppb	parts per billion
µg/L	micrograms per liter
X	Total Xylenes

EPFS GROUNDWATER SITES
2002 ANNUAL GROUNDWATER REPORT

Ramenta et al #1
Meter Code: 75155

SITE DETAILS

LEGAL DESCRIPTION: **Twn:** 27N **Rng:** 9W **Sec:** 13 **Unit:** J

NMOCD Haz Ranking: 30 **Land Type:** Navajo **Operator:** Burlington Resources

PREVIOUS ACTIVITIES

Site Assessment: Jun-96	**Excavation:** Nov-96 (436 cy)	**Soil Boring:** May-97
Monitor Well: May-97	**Geoprobe:** Feb-97	**Additional MWs:** Jun-99
Downgradient MWs: Jun-99	**Replace MW:** NA	**Quarterly Initiated:** Jun-97
ORC Nutrient Injection: NA	**Re-Excavation:** NA	**PSH Removal Initiated:** NA
Annual Initiated: NA	**Quarterly Resumed:** NA	

SUMMARY OF 2002 ACTIVITIES

MW-1: Quarterly groundwater sampling and water level monitoring was performed.

MW-2: Annual groundwater sampling (June 02) and quarterly water level monitoring was performed.

MW-3: Annual groundwater sampling (June 02) and quarterly water level monitoring was performed.

Site-Wide Activities: In March 2002 El Paso Field Services requested that both Navajo Nation EPA and New Mexico OCD close this site. Notice of decision is pending.

SUMMARY TABLES AND GRAPHS

- Analytical data are summarized in Table 1 and presented graphically in Figures 5 through 7.
- Laboratory reports are presented in Attachment 1.
- Field documentation is presented in Attachment 2.

SITE MAP

Site maps are attached as Figures 1 through 4.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2002.

Ramenta et al #1
Meter Code: 75155

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site during 2002.

ISOCONCENTRATION MAPS

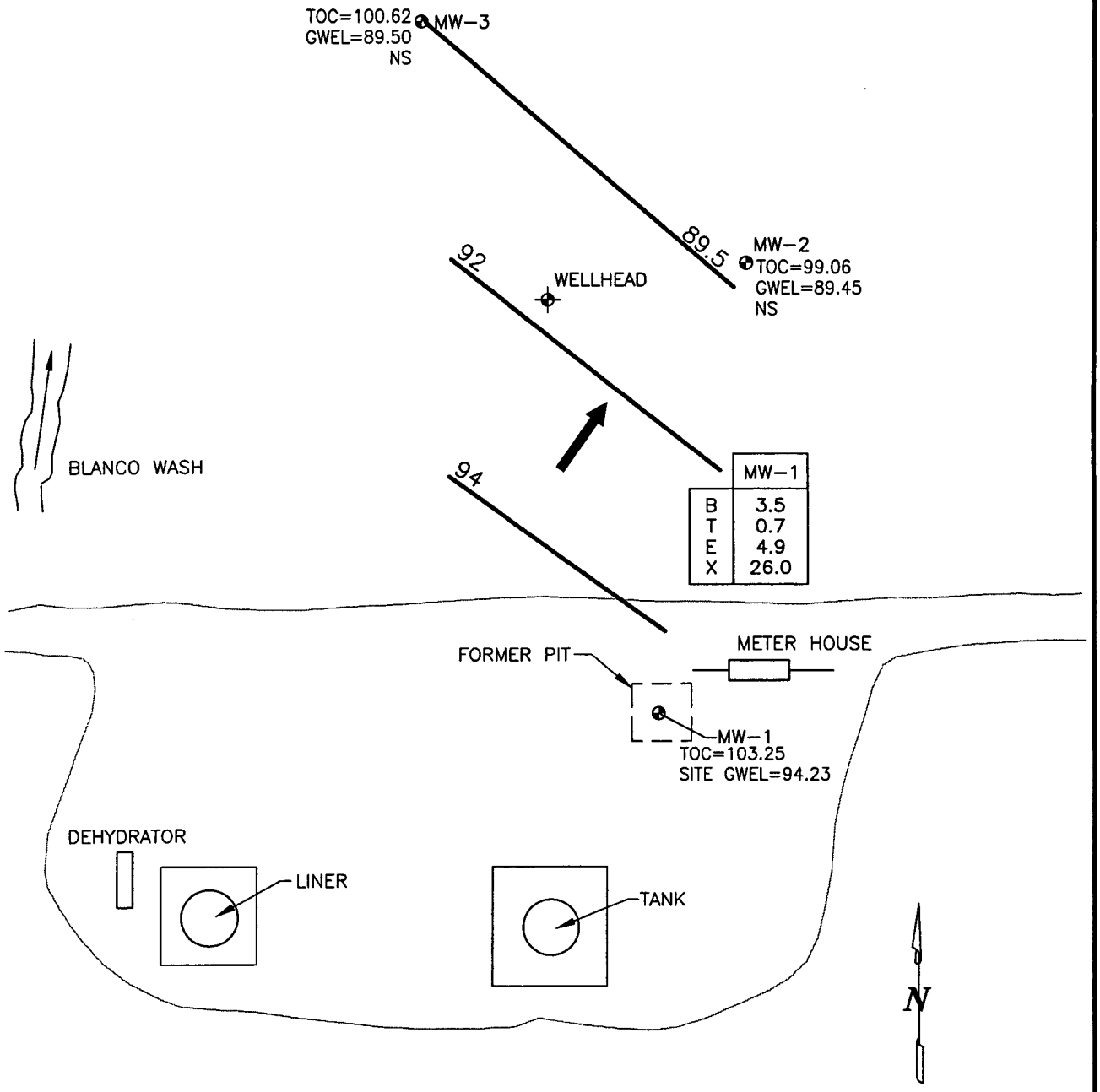
No isoconcentration maps were generated for this site. However, the attached site maps present both potentiometric surface and analytical data collected during 2002.

CONCLUSIONS

- The groundwater flow direction at this site trends toward the northeast.
- Analytical results from groundwater samples collected from this site during 2002 have continued to be below New Mexico OCD closure criteria.
- Analytical results from samples collected at MW-1 were below NNEPA closure criteria for three out of four quarters in 2002.
- Analytical results from samples collected at MW-2 and MW-3 were below NNEPA closure criteria.
- NMOCD closure criteria have been achieved, and closure of this site has been requested (see 2001 Annual Report).
- This site requires two additional consecutive quarterly groundwater sample results below closure standards at MW-1 to qualify for closure under the Navajo Nation EPA guidelines.

RECOMMENDATIONS

- EPFS will continue quarterly sampling at MW-1 until the Navajo Nation EPA closure criteria are met.
- EPFS reiterates the NMOCD closure request for this site presented in the 2001 Annual Report.
- Following approval for closure by both the Navajo Nation EPA and New Mexico OCD, all monitoring wells will be removed in accordance with the approved EPFS Monitoring Well Abandonment Plan.



LEGEND

NOT TO SCALE

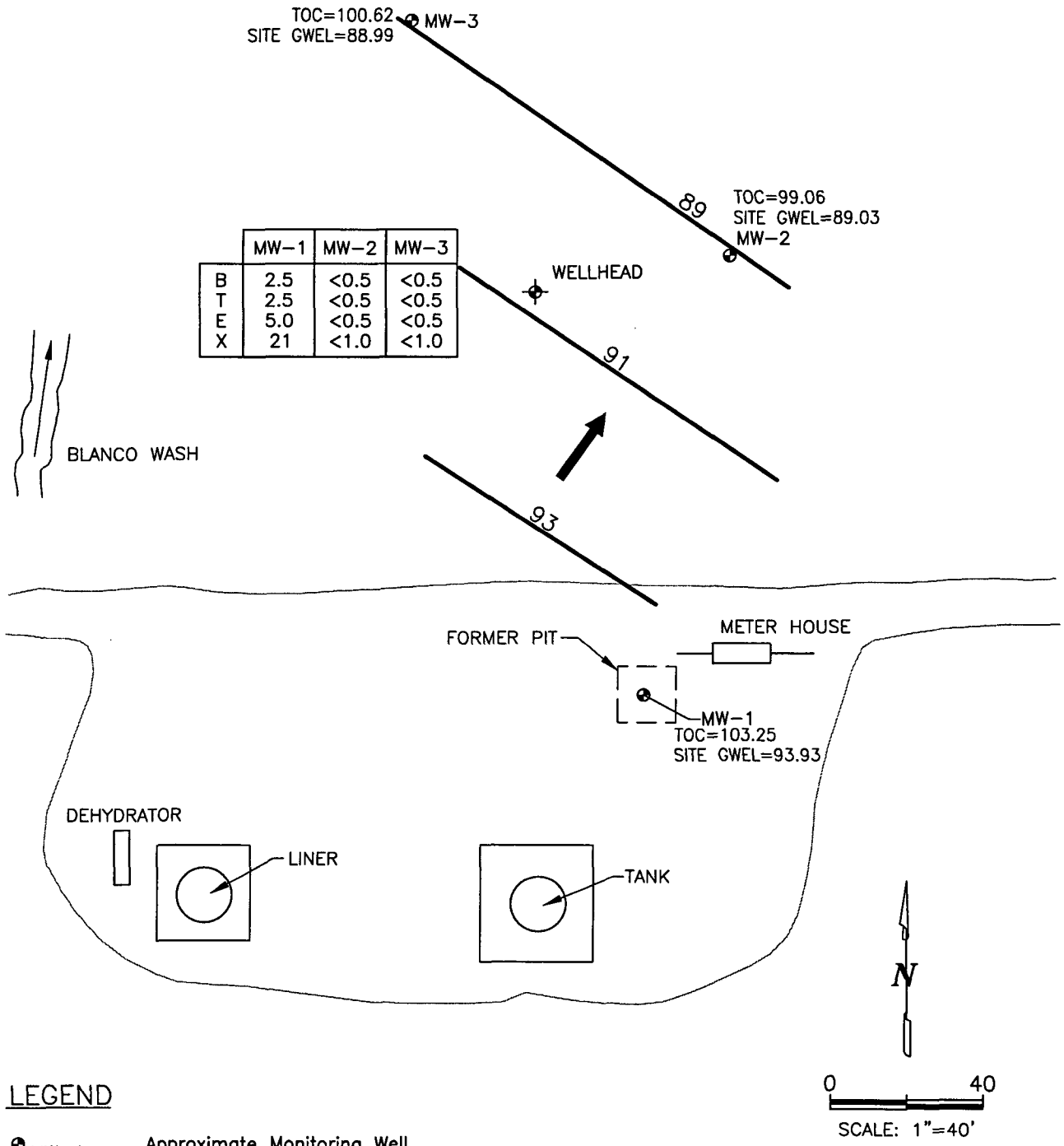
MW-1	Approximate Monitoring Well Location and Number	6566.0	Potentiometric Surface (Assumed Where Dashed)
B	Benzene (µg/L)	→	Direction of Groundwater Flow
T	Toluene (µg/L)	GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
E	Ethylbenzene (µg/L)	TOC	Top of Casing
X	Total Xylenes (µg/L)		
NS	Not Sampled		

RAMENTA ET AL #1, METER 75155
MARCH, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1

ramenta_02.dwg



	MW-1	MW-2	MW-3
B	2.5	<0.5	<0.5
T	2.5	<0.5	<0.5
E	5.0	<0.5	<0.5
X	21	<1.0	<1.0

LEGEND

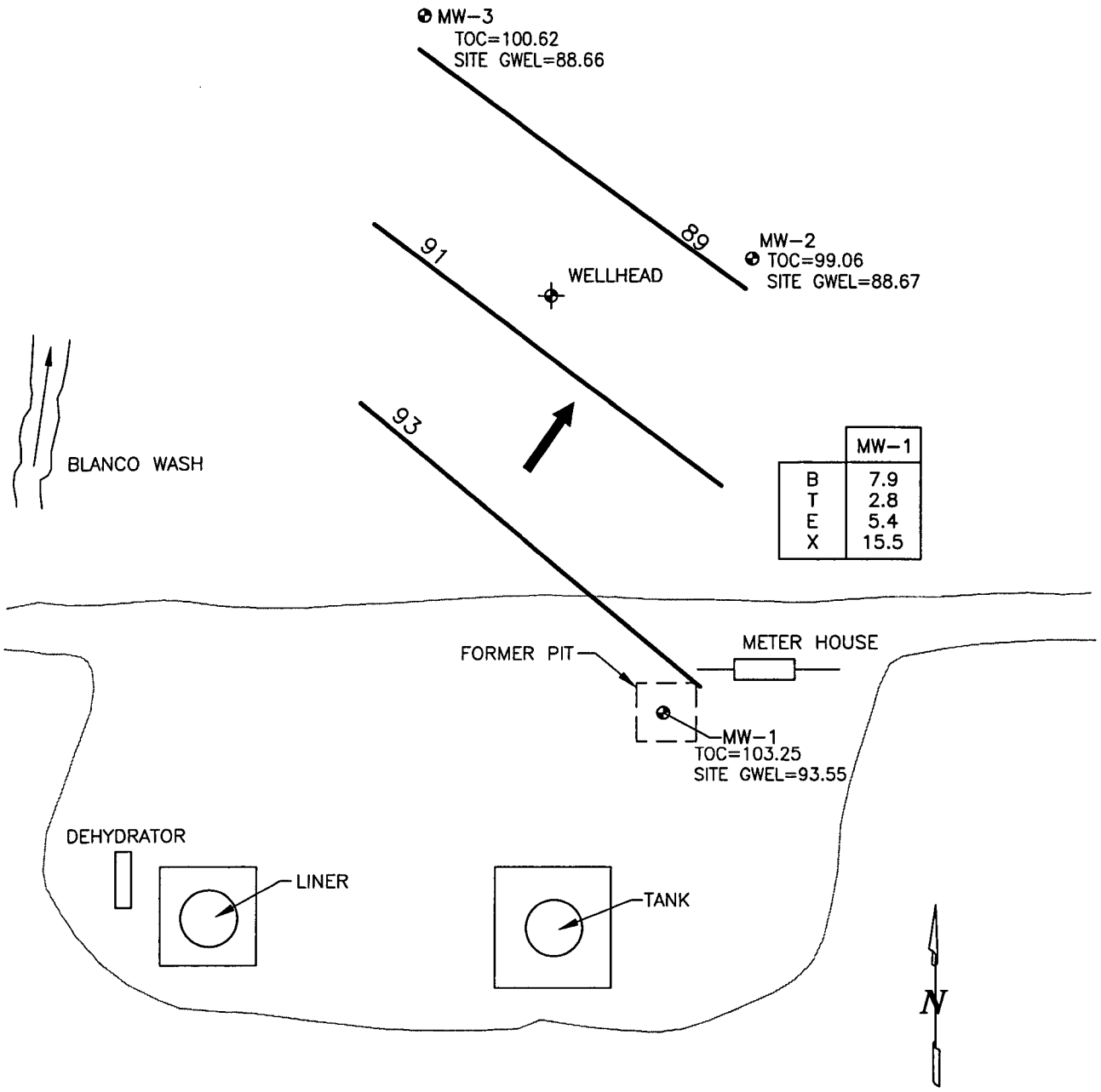
MW-1	Approximate Monitoring Well Location and Number	6566.0	Potentiometric Surface (Assumed Where Dashed)
B	Benzene (µg/L)	→	Direction of Groundwater Flow
T	Toluene (µg/L)	GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
E	Ethylbenzene (µg/L)	TOC	Top of Casing
X	Total Xylenes (µg/L)		
NS	Not Sampled		

RAMENTA ET AL #1, METER 75155
JUNE, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 2

ramenta_02.dwg



LEGEND

NOT TO SCALE

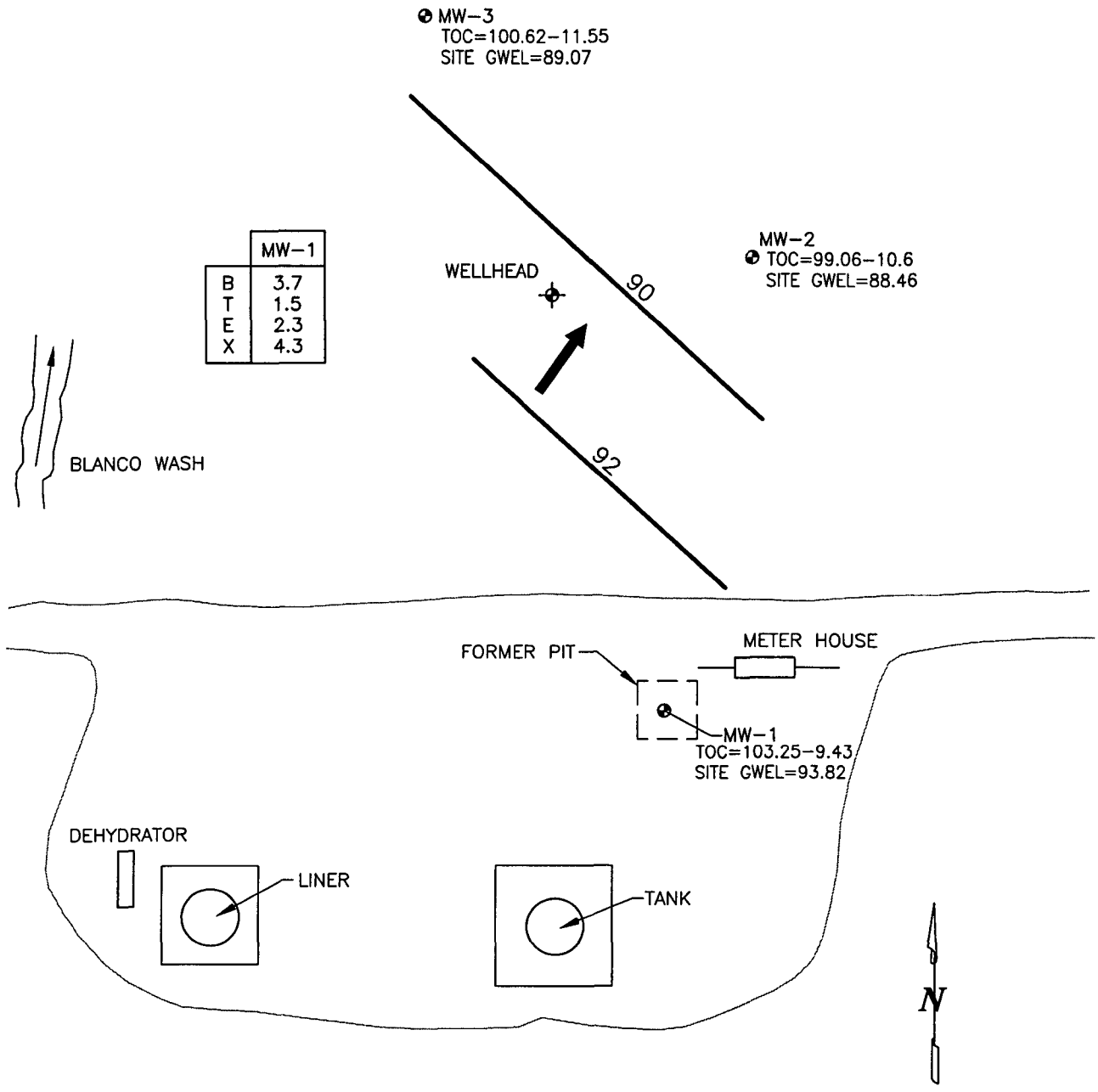
MW-1	Approximate Monitoring Well Location and Number	6566.0	Potentiometric Surface (Assumed Where Dashed)
B	Benzene (μg/L)	→	Direction of Groundwater Flow
T	Toluene (μg/L)	GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
E	Ethylbenzene (μg/L)	TOC	Top of Casing
X	Total Xylenes (μg/L)		
NS	Not Sampled		

ramenta_02.dwg

RAMENTA ET AL #1, METER 75155
SEPTEMBER, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 3



NOT TO SCALE

LEGEND

MW-1	Approximate Monitoring Well Location and Number	6566.0	Potentiometric Surface (Assumed Where Dashed)
B	Benzene (μg/L)	→	Direction of Groundwater Flow
T	Toluene (μg/L)	GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
E	Ethylbenzene (μg/L)	TOC	Top of Casing
X	Total Xylenes (μg/L)		
NS	Not Sampled		

RAMENTA ET AL #1, METER 75155
JANUARY, 2003

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 4

ramenta_02.dwg

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER
RAMENTA ET AL #1 (METER #75155)
(Page 1 of 1)

Sample Identification	Sample Date	MW Identification	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	m,p-Xylene (µg/l)	o-Xylene (µg/l)	Total Xylenes (µg/l)
REM-0203-MW1	18-Mar-2002	1	3.50	0.70	4.90	NA	NA	26
REM-0206-MW1	05-Jun-2002	1	<2.50	<2.50	5.00	NA	NA	21
02-4944-2	17-Sep-2002	1	7.90	2.80	5.40	13	2.50	15.50
03-1026-1	03-Jan-2003	1	3.7	1.5	2.3	3.3	1	4.3
REM-0206-MW2	13-Jun-2002	2	<0.50	<0.50	<0.50	NA	NA	<1.00
REM-0206-MW3	13-Jun-2002	3	<0.50	<0.50	<0.50	NA	NA	<1.00

Figure 5
BTEX Concentration and Groundwater Elevation vs. Time
Ramenta et al #1 (Meter #75155)
MW-1

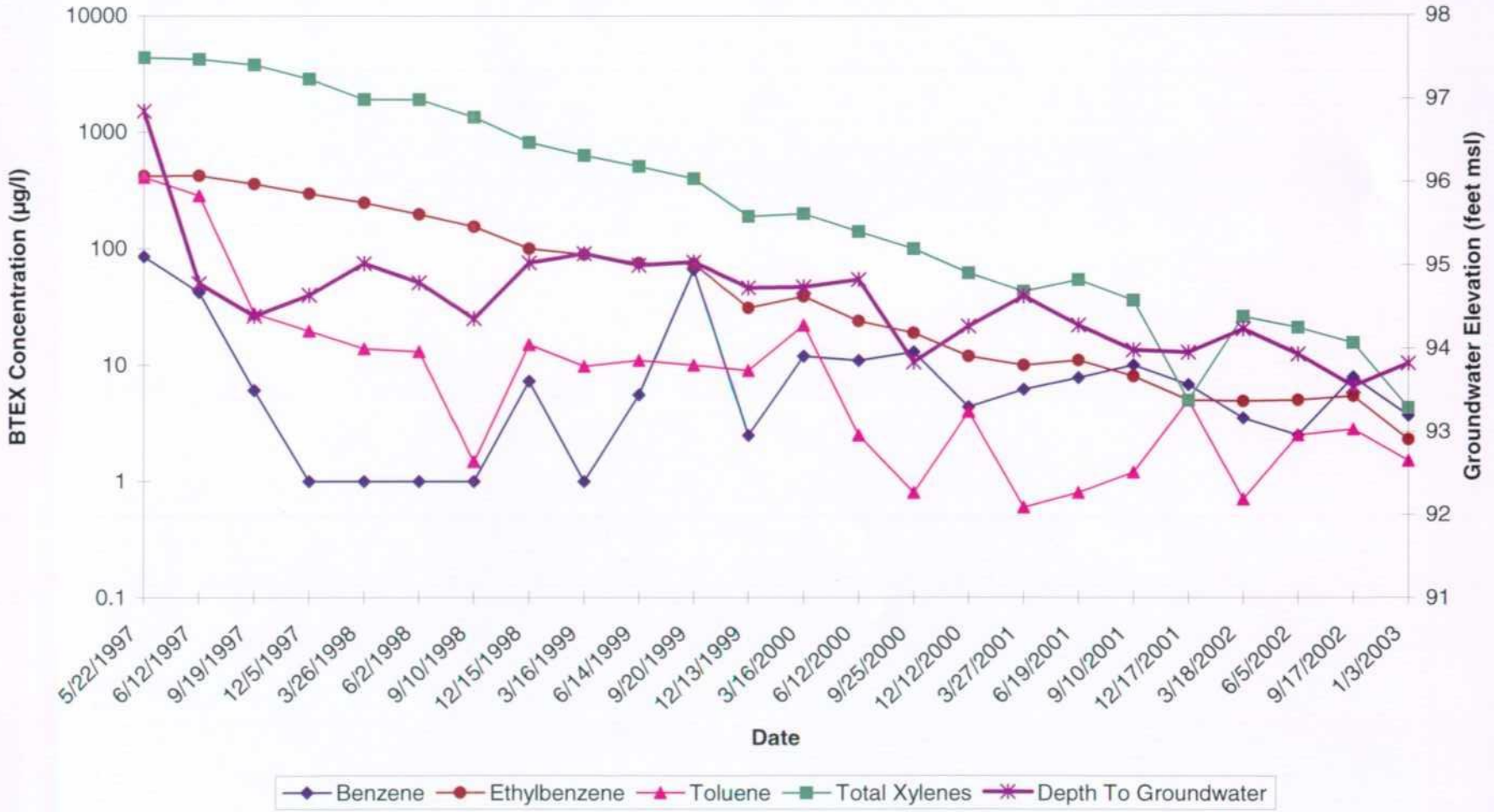


Figure 6
BTEX Concentration and Groundwater Elevation vs. Time
Ramenta et al #1 (Meter #75155)
MW-2

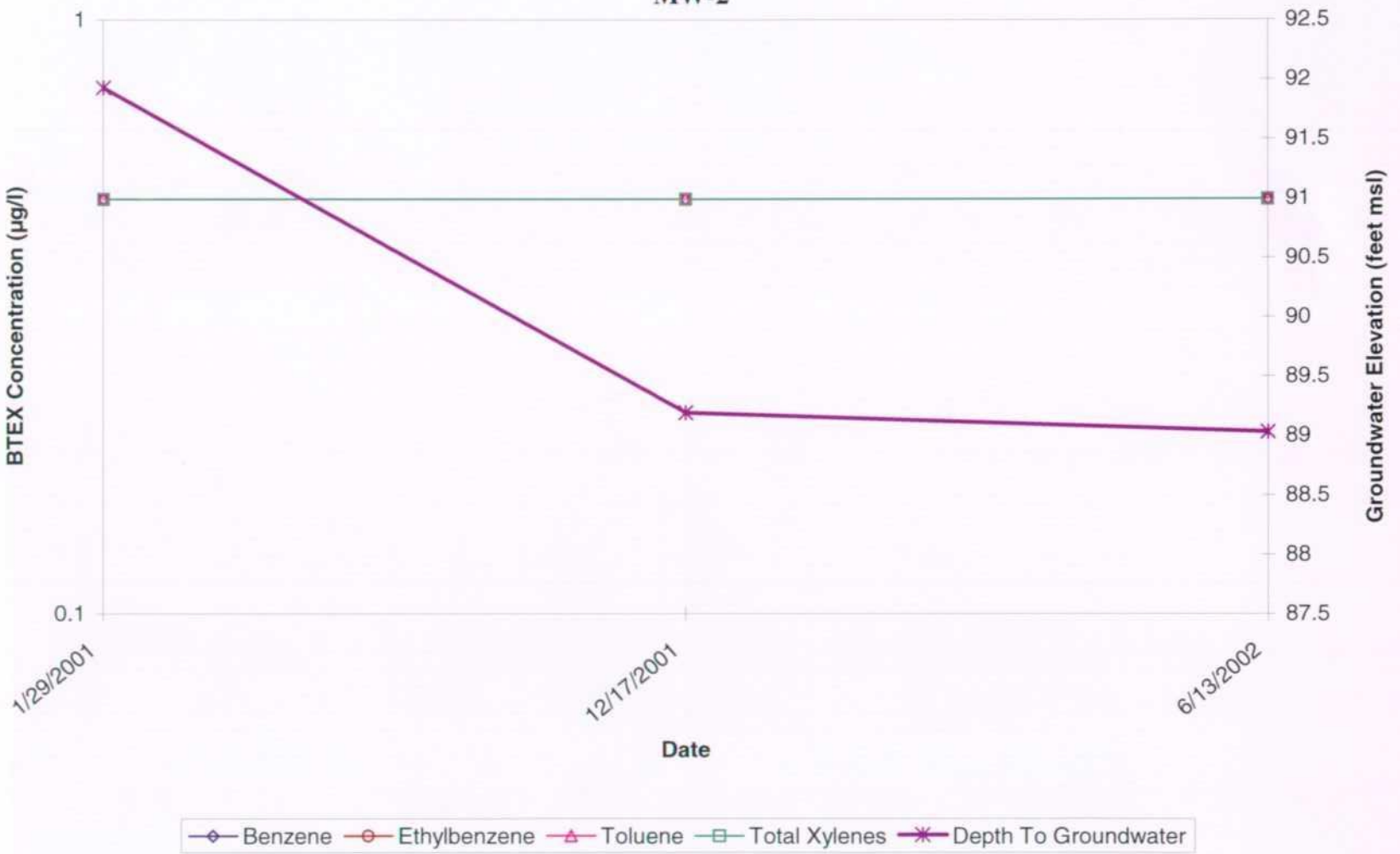
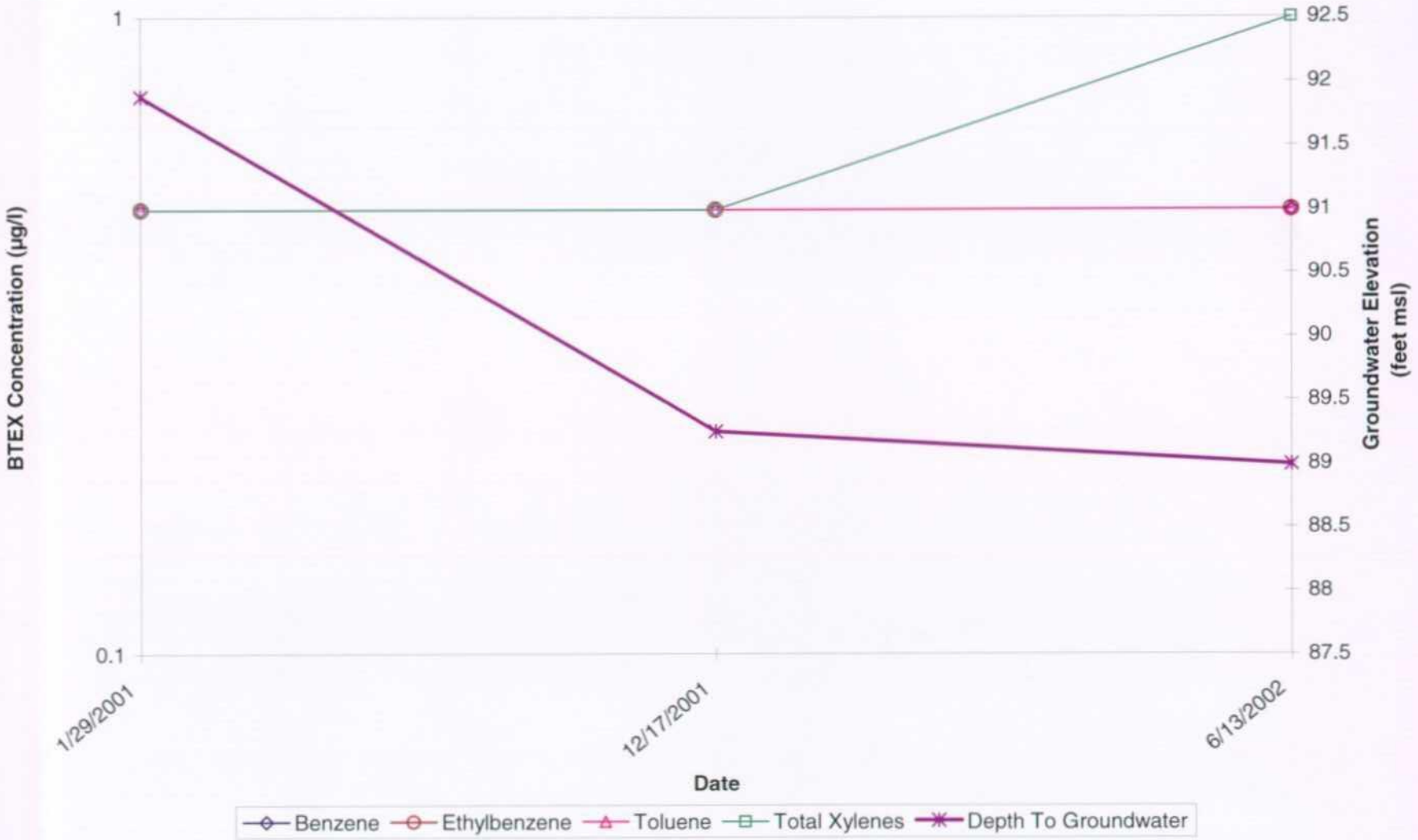


Figure 7
BTEX Concentration and Groundwater Elevation vs. Time
Ramenta et al #1 (Meter #75155)
MW-3



ATTACHMENT 1

LABORATORY REPORTS

DATA VALIDATION WORKSHEET

Analytical Method/Analytes: SW-846 8021B (BTEX) **Sample Collection Date(s):** 01/03/03

Laboratory: APCL **MWH Job Number:** EPC-SJRB (Groundwater)

Batch Identification: 03-01026 **Matrix:** Water

MS/MSD Parent(s)[a]: None **Field Replicate Parent(s):** None

Validation Complete: Brian Buttars 1-29-03 (Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	GW	Ramenta MW-1	03-01026-01	Y		Benzene @ 3.7 µg/l Ethylbenzene @ 2.3 µg/l Toluene @ 1.5 µg/l o-Xylene @ 1.0 µg/l m/p-Xylene @ 3.3 µg/l

DATA VALIDATION WORKSHEET
(Page 2 of 2)

Analytical Method: SW-846 8021B (BTEX) **MWH Job Number:** EPC-SJRB (Groundwater)

Laboratory: APCL **Batch Identification:** 03-01026

Validation Criteria								
Sample ID	**Ramenta MW-1**							
Lab ID	**03-01026-01**							
Holding Time	A							
Analyte List	A							
Reporting Limits	A							
Method Blank	A							
Trip Blank	N/A							
Equipment Rinseate Blanks	N/A							
Field Duplicate/Replicate	N/A							
Initial Calibration	N							
Initial Calibration Verification (ICV)	N							
Continuing Calibration Verification (CCV)	A							
Laboratory Control Sample (LCS)	A							
Laboratory Control Sample Duplicate (LCSD)	N							
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A							
Surrogate Spike Recovery	A							
Retention Time Window	N							
Injection Time(s)	N							
Hardcopy vs. Chain-of-Custody	A							
EDD vs. Hardcopy	N							
EDD vs. Chain of Custody	N							

(a) List QC batch identification if different than Batch ID
A indicates validation criteria were met
A/L indicates validation criteria met based upon Laboratory's QC Summary Form
X indicates validation criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
Montgomery Watson Harza
Attention: Brian Buttars
10619 South Jordan Gateway
Salt Lake City UT 84095
Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-031026
Collected by: Delbert Bekis
Collected on: 01/03/03

Received: 01/04/03
Extracted: N/A
Tested: 01/06/03
Reported: 01/14/03

Sample Description: Water
Project Description: 220013 San Juan River Basin

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-1 03-01026-1
BTXE				
Dilution Factor				1
BENZENE	8021B	µg/L	0.5	3.7
ETHYLBENZENE	8021B	µg/L	0.5	2.3
TOLUENE	8021B	µg/L	0.5	1.5
O-XYLENE	8021B	µg/L	0.5	1.0
M,P-XYLENE	8021B	µg/L	1	3.3

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
B,J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL
Contract El Paso Corp., San Jaun River Basin

Chain of Custody ID 030103DBRm
Page 1 of 1
Air Bill No. 836381676750

MWH
Phone (801) 617-3200 FAX (801) 617-4200
MWH Contact Brian Buttars
Project San Juan River Basin
Project Number 220013
Date Due 21 DAYS
Sampler's Name Delbert Belkis
(print clearly)

Location ID	Sample ID	Depth Interval (ft)	Date Collected	Time Collected	Matrix [a]	Sampling Technique [b]	ANALYSES REQUESTED: BTEX SW-846 8021B	Alkalinity SM 2320B	TDS USEPA 160.1	NM WQCC Metals SW-846 6010B & 7470A	Cations SW-846 6010B	Anions USEPA 300.0	Nitrate USEPA 300.0	Nitrite USEPA 300.0				
GW Ramenta	mw-1		01/03/03	1130	WG	B	✓											

1026

[a] **Matrix:**
SO – Soil
WS – Surface Water
WG – Ground Water
AA – Air
WQ – Trip Blank/ Equipment Blanks
WW – Wastewater

[b] **Sampling Technique:**
Composite=C
Grab=G
Hand Auger=HA
Submersible Pump=SP
Bladder Pump=BP
Bailer=B
Wellhead Faucet=WF
Hydropunch=HP

Location IDs:
Groundwater Sites=GW
Bisti=BI
Jaquez=JA
North Flare Pit=NF
South Flare Pit=SF
San Juan River Plant=SJ

Relinquished by/Affiliation	Received by/Affiliation	Date	Time
Delbert Belkis / AESE		01/03/03	1445
	[signature] / APCL	01/04/03	1145

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered
Notes: Fed-Ex

2 Ambient or Chilled
Notes:

3 Temperature 4.1 °C

4 Received Broken/Leaking (Improperly Sealed)
Y (N)
Notes:

5 Properly Preserved
(Y) N
Notes:

6 Received Within Holding Times
(Y) N
Notes:

COC Tape Was:

1 Present on Outer Package
(Y) N NA

2 Unbroken on Outer Package
(Y) N NA

3 Present on Sample
Y N (NA)

4 Unbroken on Sample
Y N (NA)
Notes:

Discrepancies Between Sample Labels and COC Record?
Y (N)
Notes:

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL QA/QC Report

Submitted to:
Montgomery Watson Harza
Attention: Brian Buttars
10619 South Jordan Gateway
Salt Lake City, UT 84095
Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-031026
Collected by: Delbert Bekis
Collected on: 01/03/03
Sample description:
Water
Project: San Juan River Basin /220013

Received: 01/04/03
Tested: 01/06/03
Reported: 01/23/03

Analysis of Water

801-031026QC

Component Name	Analysis Batch #	CCV (μg/L)	CCV %Rec	M-Blank	Conc. Unit	SP Level	LCS %Rec	MS %Rec	MSD %Rec	MS/MSD %RPD	Control Limit %Rec	Control Limit %Diff
BTXE												
Benzene	03G1020	100	96	N.D.	μg/L	18.0	84	80	77	4	68-130	31
Toluene	03G1020	100	98	N.D.	μg/L	70.0	84	80	78	4	66-133	33
Ethylbenzene	03G1020	100	99	N.D.	μg/L	18.0	90	79	77	2	65-134	35
m/p-Xylene	03G1020	200	93	N.D.	μg/L	70.0	84	79	77	3	65-134	35
o-Xylene	03G1020	100	95	N.D.	μg/L	25.0	83	79	77	3	65-134	35

Notation:
ICV – Initial Calibration Verification
CCV – Continuation Calibration Verification
LCS – Lab Control Spike
MS – Matrix Spike
MSD – Matrix Spike Duplicate
ICS – Interference Check Standard
MD – Matrix Duplicate
N.D. – Not detected or less than PQL
CCB – Continuation Calibration Blank
M-blank – Method Blank
SP Level – Spike Level
%Rec – Recovery Percent
%RPD – Relative Percent Differences
%Diff – Control Limit for %RPD
ICP-SD – ICP Serial Dilution
N.A. – Not Applicable

Respectfully submitted,

Regina Kirakozova,
Associate QA/QC Director
Applied P & Ch Laboratory

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 8021B

Client Name:	Montgomery Watson Harza	Contract No:		Lab Code:	APCL
Case No:		SAS No:		SDG Number:	031026
Project ID:	San Juan River Basin	Project No:	220013	Sample Matrix:	Water
		Batch No:	03G1020		

#	Client Sample No	Lab Sample ID	S1 % #	TOT OUT
1		03G1020-MB-01	87	0
2		03G1020-LCS-01	86	0
3		03G1020-LSD-01	86	0
4	EFF03JAN03	03-1023-1MS	87	0
5	EFF03JAN03	03-1023-1MSD	86	0
6	MW-1	03-1026-1	95	0
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

	QC Control Limit
S1 = 4-BROMO-FLUOROBENZENE (PID)	65-134

Column to be used to flag recovery values:

* – Values outside of contract required QC Limits D – Surrogate diluted out I – Matrix Interference

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL
Contract El Paso Corp., San Jaun River Basin

Chain of Custody ID 030103DBRm
Page 1 of 1
Air Bill No. 836381676750

MWH
Phone (801) 617-3200 FAX (801) 617-4200
MWH Contact Brian Buttars
Project San Juan River Basin
Project Number 220013
Date Due 21 DAYS
Sampler's Name Delbert Belkis
(print clearly)

Location ID	Sample ID	Depth Interval (ft)	Date Collected	Time Collected	Matrix [a]	Sampling Technique [b]	ANALYSES REQUESTED: BTEX SW-846 8021B	Alkalinity SM 2320B	TDS USEPA 160.1	NM WQCC Metals SW-846 6010B & 7470A	Cations SW-846 6010B	Anions USEPA 300.0	Nitrate USEPA 300.0	Nitrite USEPA 300.0				
GW Ramenta	mw-1		01/03/03	1130	WG	B	✓											

Logged 1-9-03

1026

[a] Matrix:
SO – Soil
WS – Surface Water
WG – Ground Water
AA – Air
WQ – Trip Blank/ Equipment Blanks
WW – Wastewater

[b] Sampling Technique:
Composite=C
Grab=G
Hand Auger=HA
Submersible Pump=SP
Bladder Pump=BP
Bailer=B
Wellhead Faucet=WF
Hydropunch=HP

Location IDs:
Groundwater Sites=GW
Bistl=BI
Jaquez=JA
North Flare Pit=NF
South Flare Pit=SF
San Juan River Plant=SJ

Relinquished by/Affiliation	Received by/Affiliation	Date	Time
Delbert Belkis / AESE		01/03/03	1445
	[signature] / APCL	01/04/03	1145

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered
Notes: Fed-Ex

2 Ambient or Chilled
Notes:

3 Temperature 4.1°C

4 Received Broken/Leaking (Improperly Sealed)
Y (N)
Notes:

5 Properly Preserved
(Y) N
Notes:

6 Received Within Holding Times
(Y) N
Notes:

COC Tape Was:

1 Present on Outer Package
(Y) N NA

2 Unbroken on Outer Package
(Y) N NA

3 Present on Sample
Y N (NA)

4 Unbroken on Sample
Y N (NA)
Notes:

Discrepancies Between Sample Labels and COC Record?
Y (N)
Notes:

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: 1026 Client Name/Project: MWH / El Paso

1. Sample Arrival

Date/Time Received 1/4/03 1145 Date/Time Opened 1/4/03 1145 By (name): KennyChan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☑ FedEx ☐ APCL Empl: _____

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By: _____

☐ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received 1

☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☑ #Samples OK? _____

☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 4.1 _____ _____ _____ _____ _____

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12

If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr

☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP

☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: _____

Type: ☐ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag

☑ Quantity OK? ☐ Leaking? ☐ Anomaly?

☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?

Labels: ☐ Unique ID? ☑ Date/Time ☐ Preserved?

7. Turn Around Time

☑ RUSH TAT: 5days ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____

☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:_____)Date/Time:_____

Received/Checked by: KennyChan Date: 4 Jan 2003 Time: 11:21 a.m.

Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.texfiles]smprcl.tex.

Applied P & Ch Laboratory
[redacted]760 Magnolia Ave. Chino CA 91710
[redacted]: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

03-01026 (0984_1008) (2721900_1008)

01/06/03

Part 1: General Information

☐	Company Information	Name:	*Montgomery Watson Harza*
		Address:	*10619 South Jordan Gateway ,Salt Lake City ,UT 84095*
☐	Project Information	Project Description:	*San Juan River Basin*
			Hill AFB
		Project #:	*220013*
☐	Billing Information	P.O. #:	
		Bill Address:	*10619 South Jordan Gateway ,Salt Lake City ,UT 84095*
		Lab Project ID:	*1999_0746*
		Client Database #:	*04*
☐	Receiving Information	Who Received Sample?	*Kenny Chan*
		Receiving Date/Time:	*01/04/03 1145*
		COC No.	
☐	Shipping Information	Shipping Company	*Express*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*4.1 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*QC and Surro. Rep.*
☐	Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Container	Preservative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days	
1	MW-1 /	VOA	03-01026-1	W	V	C	40	2	G	010303	N	0	6	☐

Part 3: Analysis Information

Test Items: ☐ 8021B BTXE

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	BTXE	
1	MW-1	VOA	03-01026-1	W	X	☐

Login By En-Yu Paul Kou

Check By

DATA VALIDATION WORKSHEET

Analytical Method/Analytes: SW-846 8021B (BTEX) **Sample Collection Date(s):** 09/17/02

Laboratory: APCL **MWH Job Number:** EPC-SJRB (Ground Water)

Batch Identification: 02-04944 **Matrix:** Water

QC Identification[a]: _____ **Page:** 1 of 2

Validation Complete: Brian Buttars 10-9-02
(Date/Signature)

Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
GW	Jennepah MW-1	02-04944-01	Y	B B	Toluene @ 52 µg/l m/p-Xylene @ 130 µg/l
GW	Ramenta MW-1	02-04944-02	Y	B B	Toluene @ 2.8 µg/l m/p-Xylene @ 13 µg/l
QC	TB02091701	02-04944-03	Y		Toluene @ 0.4T µg/l m/p-Xylene @ 0.8T µg/l

DATA VALIDATION WORKSHEET

Analytical Method: SW-846 8021B (BTEX) **MWH Job Number:** EPC-SJRB (Ground Water)

Laboratory: APCL **Batch Identification:** 02-04944

Validation Criteria								
Sample ID	**Jennepah MW-1**	**Ramenta MW-1**						
Lab ID	**02-04944-01**	**02-04944-02**						
Hardcopy vs. Chain-of-Custody	A	A						
Holding Time	A	A						
Analyte List	A	A						
Reporting Limits	A	A						
Method Blank	A	A						
Trip Blank	A'	A'						
Equipment Rinseate Blanks	N/A	N/A						
Field Duplicate/Replicate	N/A	N/A						
Initial Calibration	N	N						
Initial Calibration Verification (ICV)	N	N						
Continuing Calibration Verification (CCV)	A	A						
Laboratory Control Sample (LCS)	A	A						
Laboratory Control Sample Duplicate (LCSD)	N	N						
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A						
Surrogate Spike Recovery	A	A						
Retention Time Window	N	N						
Injection Time(s)	N	N						
EDD vs. Hardcopy	N	N						
EDD vs. Chain of Custody	N	N						

(a) List QC batch identification if different than Batch ID
A indicates validation criteria were met
A/L indicates validation criteria met based upon Laboratory's QC Summary Form
X indicates validation criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) The following analytes were detected in the trip blank:
   a) Toluene @ 0.4T µg/L, qualify all sample concentrations less than or equal to 2.0 µg/L with a "UB" flag and all sample concentrations greater than 2.0 µg/l with a "B" flag.
   b) m/p-Xylene @ 0.8T µg/L, qualify all sample concentrations less than or equal to 4.0 µg/L with a "UB" flag and all sample concentrations greater than 4.0 µg/l with a "B" flag.

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
Montgomery Watson Harza
Attention: Brian Buttars
10619 South Jordan Gateway
Salt Lake City UT 84095
Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-024944
Collected by: Asley Lowe
Collected on: 09/17/02

Received: 09/18/02
Extracted: N/A
Tested: 09/19-26/02
Reported: 09/25/02

Sample Description: Water
Project Description: 220013 San Juan River Basin

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result MW-1 GW Jennepah 02-04944-1	MW-1 GW Ramenta 02-04944-2	TB02091701 02-04944-3
BTXE						
Dilution Factor				20	1	1
BENZENE	8021B	µg/L	0.5	32	7.9	<0.5
ETHYLBENZENE	8021B	µg/L	0.5	27	5.4	<0.5
TOLUENE	8021B	µg/L	0.5	52	2.8	0.4J
O-XYLENE	8021B	µg/L	0.5	10	2.5	<0.5
M,P-XYLENE	8021B	µg/L	1	130	13	0.8J

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Dau
Laboratory Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL QA/QC Report

Submitted to:
Montgomery Watson Harza
Attention: Brian Buttars
10619 South Jordan Gateway
Salt Lake City, UT 84095
Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-024944
Collected by: Asley Lowe
Collected on: 09/17/02
Sample description:
Water
Project: San Juan River Basin /220013

Received: 09/18/02
Tested: 09/19-26/02
Reported: 10/03/02

Analysis of Water

801-024944QC

Component Name	Analysis Batch #	CCV (µg/L)	CCV %Rec	M-Blank	Conc. Unit	SP Level	LCS %Rec	MS %Rec	MSD %Rec	MS/MSD %RPD	Control Limit %Rec	Control Limit %Diff
BTXE												
Benzene	02G4009	100	93	N.D.	µg/L	18.0	95	86	90	5	68-130	31
Toluene	02G4009	100	94	N.D.	µg/L	70.0	92	94	93	2	66-133	33
Ethylbenzene	02G4009	100	96	N.D.	µg/L	18.0	95	94	91	3	65-134	35
m/p-Xylene	02G4009	200	89	N.D.	µg/L	70.0	92	95	93	2	65-134	35
o-Xylene	02G4009	100	90	N.D.	µg/L	25.0	92	98	95	2	65-134	35

Notation:

ICV - Initial Calibration Verification
CCV - Continuation Calibration Verification
LCS - Lab Control Spike
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ICS - Interference Check Standard
MD - Matrix Duplicate
N.D. - Not detected or less than PQL
CCB - Continuation Calibration Blank
M-blank - Method Blank
SP Level - Spike Level
%Rec - Recovery Percent
%RPD - Relative Percent Differences
%Diff - Control Limit for %RPD
ICP-SD - ICP Serial Dilution
N.A. - Not Applicable

Respectfully submitted,

Regina Kirakozova,
Associate QA/QC Director
Applied P & Ch Laboratory

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 8021B

Client Name:	Montgomery Watson Harza	Contract No:		Lab Code:	APCL
Case No:		SAS No:		SDG Number:	021944
Project ID:	San Juan River Basin	Project No:	220013	Sample Matrix:	Water
		Batch No:	02G4009		

#	Client Sample No	Lab Sample ID	S1 %	#	TOT OUT
1		02G4009-LCS-01	80		0
2		02G4009-LSD-01	81		0
3		02G4009-MB-02	85		0
4	H5116	02-5024-7MS	86		0
5	H5116	02-5024-7MSD	84		0
6	MW-1 GW JENNEPAH	02-4944-1	90		0
7	MW-1 GW RAMENTA	02-4944-2	99		0
8	TB02091701	02-4944-3	88		0
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

	QC Control Limit
S1 = 4-BROMO-FLUOROBENZENE (PID)	65-134

Column to be used to flag recovery values:

* Values outside of contract required QC Limits D – Surrogate diluted out I - Matrix Interference

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL
Contract El Paso Corp., San Jaun River Basin

Chain of Custody ID 020917ALL
Page 1 of 1
Air Bill No. 836557901511

MWH
Phone (801) 617-3200 FAX (801) 617-4200
MWH Contact Brian Buttars
Project San Juan River Basin
Project Number 220013
Date Due 21 days
Sampler's Name Ashley Lowe
(print clearly)

Location ID	Sample ID	Depth Interval (ft)	Date Collected	Time Collected	Matrix [a]	Sampling Technique [b]	ANALYSES REQUESTED: BTEX SW-846 8021B	Alkalinity SM 2320B	TDS USEPA 160.1	NM WQCC Metals SW-846 6010B & 7470A	Cations SW-846 6010B	Anions USEPA 300.0	Nitrate USEPA 300.0	Nitrite USEPA 300.0				
GW Ramenta	MW-1		09/17/02	10:18	WG	B	✓											
GW Jennepah	MW-1		09/17/02	11:38	WG	B	✓											
TB02091701			9/17/02		W		✓											

4944

[a] Matrix:
SO – Soil
WS – Surface Water
WG – Ground Water
AA – Air
WQ – Trip Blank/ Equipment Blanks
WW – Wastewater

[b] Sampling Technique:
Composite=C
Grab=G
Hand Auger=HA
Submersible Pump=SP
Bladder Pump=BP
Bailer=B
Wellhead Faucet=WF
Hydropunch=HP

Location IDs:
Groundwater Sites=GW
Bisti=BI
Jaquez=JA
North Flare Pit=NF
South Flare Pit=SF
San Juan River Plant=SJ

Relinquished by/Affiliation	Received by/Affiliation	Date	Time
Ashley L Lowe / AESE	APCC	09/17/02	14:00
		9/18/02	1000

LABORATORY USE ONLY

SAMPLES WERE:
1 (Shipped) or hand delivered
Notes:
2 Ambient or Chilled
Notes:
3 Temperature 4.6
4 Received Broken/Leaking (Improperly Sealed)
Y (N)
Notes:
5 Properly Preserved
(Y) N
Notes:
6 Received Within Holding Times
(Y) N
Notes:

COC Tape Was:
1 Present on Outer Package
(Y) N NA
2 Unbroken on Outer Package
(Y) N NA
3 Present on Sample
Y (N) NA
4 Unbroken on Sample
Y N (NA)
Notes:

Discrepancies Between Sample Labels and COC Record?
Y (N)
Notes:

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **206051**
June 21, 2002

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICE
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name RAMENTA ET AL #1
Project Number 1517000121

Attention: LISA WINN/SCOTT POPE

On 06/14/02 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE LABORATORIES

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

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 206051
PROJECT #	: 1517000121	DATE RECEIVED	: 06/14/02
PROJECT NAME	: RAMENTA ET AL #1	REPORT DATE	: 06/21/02

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
206051 - 01	RAM-0206-MW2	AQUEOUS	06/13/02
206051 - 02	RAM-0206-MW3	AQUEOUS	06/13/02

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

'EST : EPA 8021 MODIFIED
:LIENT : AMEC EARTH & ENVIRONMENTAL PINNACLE I.D.: 206051
'ROJECT # : 1517000121
'ROJECT NAME : RAMENTA ET AL #1

SAMPLE D. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
1	RAM-0206-MW2	AQUEOUS	06/13/02	NA	06/16/02	1
2	RAM-0206-MW3	AQUEOUS	06/13/02	NA	06/16/02	1

'ARAMETER	DET. LIMIT	UNITS	RAM-0206-MW2	RAM-0206-MW3
BENZENE	0.50	UG/L	< 0.5	< 0.5
'OLUENE	0.50	UG/L	< 0.5	< 0.5
:THYLBENZENE	0.50	UG/L	< 0.5	< 0.5
'OTAL XYLENES	1.0	UG/L	< 1.0	< 1.0
SURROGATE:				
BROMOFLUOROBENZENE (%)			95	98
SURROGATE LIMITS	(74 - 120)			

:HEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206051
BLANK I. D.	: 061602	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/16/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA ET AL #1		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
SURROGATE:		
BROMOFLUOROBENZENE (%)		95
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

EST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206051
ATCH #	: 061602	DATE EXTRACTED	: N/A
LIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/16/02
ROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: RAMENTA ET AL #1	UNITS	: UG/L

ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
ENZENE	<0.5	20.0	19.2	96	19.6	98	2	(80 - 120)	20
OLUENE	<0.5	20.0	19.8	99	20.1	101	2	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.0	100	20.2	101	1	(80 - 120)	20
OTAL XYLENES	<1.0	60.0	62.0	103	62.7	105	1	(80 - 120)	20

HE[redacted]T NOTES:
/[redacted]

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

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

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

'EST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206051
1SMSD #	: 206052-01	DATE EXTRACTED	: N/A
:LIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/16/02
'ROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
'ROJECT NAME	: RAMENTA ET AL #1	UNITS	: UG/L

'ARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
3ENZENE	<0.5	20.0	19.4	97	18.8	94	3	(80 - 120)	20
'OLUENE	<0.5	20.0	20.0	100	19.4	97	3	(80 - 120)	20
:THYLBENZENE	<0.5	20.0	20.1	101	19.5	98	3	(80 - 120)	20
'OTAL XYLENES	<1.0	60.0	62.4	104	60.5	101	3	(80 - 120)	20

:HE[redacted]T NOTES:
N/[redacted]

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

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

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 6-13-02 PAGE: 1 OF 1

PLI Accession #: 2[redacted]051

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	LISA Winn
COMPANY:	AMEC
ADDRESS:	2060 AFTON Place Farmington NM. 87401
PHONE:	(505) 327 7928
FAX:	(505) 326-5721
BILL TO:	SCOTT Poppe
COMPANY:	EL Paso Field Services
ADDRESS:	614 Reilly AVE Farmington NM 87401

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX) ~~8015 (Gasoline) BTEX~~	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals
RAM-0206-MW2	6-13-02	1215	H_2O	01				X																						
RAM-0206-MW3	6-13-02	1250	H_2O	02				X																						

PROJECT INFORMATION	
PROJ. NO.	151700012 1
PROJ. NAME	EPFS Gth. Prog.
P.O. NO.:	
SHIPPED VIA	Greg Hunt

SAMPLE RECEIPT	
NO. OF CONTAINERS:	2
CUSTODY SEALS:	Y/N
RECEIVED INTACT:	Y/N
BOTTLES INTACT:	Y/N

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

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

CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER

METHANOL PRESERVATION ☐

COMMENTS: FIXED FEE ☐

RAMENTA ET AL #1

Meter # (75155)

RELINQUISHED BY: 1.	RELINQUISHED BY:
Signature: Chris A Mac Time: 1600	Signature: Time:
Printed Name: Chris A Mac Date: 6-13-02	Printed Name: Date:
Company: AMEC	Company:
See reverse side (Force Majeure)	
RECEIVED BY: 1.	**RECEIVED BY: (LAB)**
Signature: Time:	Signature: Time: 1600
Printed Name: Date:	Printed Name: Date: 6/13/02
Company:	Pinnacle Laboratories Inc.

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **206035**
June 17, 2002

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name RAMENTA ET AL #1
Project Number 1517000121

Attention: LISA WINN/SCOTT POPE

On 06/07/02 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE LABORATORIES

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

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 206035
PROJECT #	: 1517000121	DATE RECEIVED	: 06/07/02
PROJECT NAME	: RAMENTA ET AL #1	REPORT DATE	: 06/17/02

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
206035 - 01	RAM-0206-MW1	AQUEOUS	06/05/02

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL
PROJECT # : 1517000121
PROJECT NAME : RAMENTA ET AL #1

PINNACLE I.D.: 206035

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	RAM-0206-MW1	AQUEOUS	06/05/02	NA	06/10/02	5

PARAMETER	DET. LIMIT	UNITS	RAM-0206-MW1
BENZENE	0.5	UG/L	< 2.5
TOLUENE	0.5	UG/L	< 2.5
ETHYLBENZENE	0.5	**UG/L**	**5.0**
TOTAL XYLENES	1.0	**UG/L**	**21**

SURROGATE:
BROMOFLUOROBENZENE (%) 103
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206035
BLANK I. D.	: 060902	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/09/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA ET AL #1		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
SURROGATE:		
BROMOFLUOROBENZENE (%)		99
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

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Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206035
BLANK I. D.	: 061002	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/10/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA ET AL #1		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
SURROGATE:		
BROMOFLUOROBENZENE (%)		95
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206035
BATCH #	: 060902	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/09/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA ET AL #1	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	19.1	96	19.4	97	2	(80 - 120)	20
TOLUENE	<0.5	20.0	20.0	100	20.8	104	4	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.3	102	20.9	105	3	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	62.9	105	64.6	108	3	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

PINNACLE LABORATORIES

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

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206035
BATCH #	: 061002	DATE EXRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/10/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA ET AL #1	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	19.1	96	18.9	95	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.0	100	19.8	99	1	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.3	102	20.1	101	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	62.8	105	62.3	104	1	(80 - 120)	20

CHEMIST NOTES:
N/

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

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

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

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206035
MSMSD #	: 206037-01	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/09/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA ET AL #1	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	19.4	97	19.2	96	1	(80 - 120)	20
TOLUENE	<0.5	20.0	20.4	102	20.4	102	0	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	20.8	104	20.6	103	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	64.3	107	64.2	107	0	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE 6-5-02 PAGE: 1 OF 1

PLI Accession #: 206035

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	LISA Winn
COMPANY:	AMEC
ADDRESS:	2060 AFTON place Farmington NM 87401
PHONE:	(505) 325-7928
FAX:	(505) 326-5721
BILL TO:	SCOTT Pope
COMPANY:	El Paso Field Services
ADDRESS:	614 Reilly AVE Farmington NM 87401

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/~~8015~~ (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals
RAM-0206-MW1	6-5-02	1040	H_2O	01				X																				

PROJECT INFORMATION	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	RELINQUISHED BY: 1.	RELINQUISHED BY:
PROJ. NO.: 517000121	(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☑	Signature: Time: 1430	Signature: Time:
PROJ. NAME: EPFS G.V. proj.	CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER	Printed Name: Date: Lisa Winn 6-6-02	Printed Name: Date:
P.O. NO.:	METHANOL PRESERVATION ☐	Company: AMEC	Company:
SHIPPED VIA: Greyhound	COMMENTS: FIXED FEE ☐	See reverse side (Force Majeure)	
SAMPLE RECEIPT	Ramenta ET AL #1	RECEIVED BY: 1.	RECEIVED BY: (LAB)
NO. CONTAINERS:	Meter # (75155)	Signature: Time:	Signature: Time: 1050
CUSTODY SEALS: Y / N		Printed Name: Date:	Printed Name: Date: 6/6/02
RECEIVED INTACT:		Company:	Pinnacle Laboratories Inc.
BRIEF GEO:			

PINNACLE LABORATORIES

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

Pinnacle Lab ID number **203066**
April 12, 2002

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name RAMENTA 1
Project Number 1517000121

Attention: LISA WINN/SCOTT POPE

On 03/19/02 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE LABORATORIES

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

CLIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 203066
PROJECT #	: 1517000121	DATE RECEIVED	: 03/19/02
PROJECT NAME	: RAMENTA 1	REPORT DATE	: 04/12/02

PINNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
203066 - 01	REM-0203-MW1	AQUEOUS	03/18/02
203066 - 02	TRIP BLANK	AQUEOUS	03/09/02

PINNACLE LABORATORIES

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Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : AMEC EARTH & ENVIRONMENTAL PINNACLE I.D.: 203066
PROJECT # : 1517000121
PROJECT NAME : RAMENTA 1

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
01	REM-0203-MW1	AQUEOUS	03/18/02	NA	03/25/02	1
02	TRIP BLANK	AQUEOUS	03/09/02	NA	03/21/02	1

PARAMETER	DET. LIMIT	UNITS	REM-0203-MW1	TRIP BLANK
BENZENE	0.5	**UG/L**	**3.5**	< 0.5
TOLUENE	0.5	**UG/L**	**0.7**	< 0.5
ETHYLBENZENE	0.5	**UG/L**	**4.9**	< 0.5
TOTAL XYLENES	1.0	**UG/L**	**26**	< 1.0
SURROGATE:				
BROMOFLUOROBENZENE (%)			110	90
SURROGATE LIMITS	(80 - 120)			

CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 203066
BLANK I. D.	: 032102	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 03/21/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA 1		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0

SURROGATE:
BROMOFLUOROBENZENE (%) 92
SURROGATE LIMITS: (80 - 120)
CHEMIST NOTES:
N/A

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GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 203066
BLANK I. D.	: 032502	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 03/25/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA 1		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<1.0
SURROGATE:		
BROMOFLUOROBENZENE (%)		86
SURROGATE LIMITS:	(80 - 120)	

CHEMIST NOTES:
N/A

PINNACLE LABORATORIES

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS LCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 203066
LCS LCSD #	: 032102	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 03/21/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA 1	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.0	90	18.4	92	2	(80 - 120)	20
TOLUENE	<0.5	20.0	18.2	91	18.5	93	2	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	17.8	89	18.1	91	2	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	55.3	92	56.1	94	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

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GAS CHROMATOGRAPHY QUALITY CONTROL
LCS LCSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 203066
LCS LCSD #	: 032502	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 03/25/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA 1	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.2	91	17.9	90	2	(80 - 120)	20
TOLUENE	<0.5	20.0	18.2	91	17.1	86	6	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	17.9	90	16.8	84	6	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	55.6	93	52.3	87	6	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

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Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 203066
MSMSD #	: 203054-01	DATE EXTRACTED	: N/A
CLIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 03/21/02
PROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: RAMENTA 1	UNITS	: UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	18.3	92	18.2	91	1	(80 - 120)	20
TOLUENE	<0.5	20.0	18.2	91	18.9	95	4	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	17.7	89	17.9	90	1	(80 - 120)	20
TOTAL XYLENES	<1.0	60.0	55.2	92	55.7	93	1	(80 - 120)	20

CHEMIST NOTES:
N/A

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

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

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 3-18-02 PAGE: 1 OF 1

PLI Accession #: 203060

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PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: LISA Winn

COMPANY: AMEC

ADDRESS: 2060 AFTON Place
Farmington N.M. 87401

PHONE: (505) 327-7828

FAX: (505)

BILL TO: SCOTT pope

COMPANY: El paso Field Services

ADDRESS: 614 Reilly AVE
Farmington N.M. 87401

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides /PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:	Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals
REM-0203-MW1	3-18-02	1326	H2O	01					X																			
Trip Blank	3-4-02	1605	H2O	02					X																			

PROJECT INFORMATION	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	RELINQUISHED BY: 1	RELINQUISHED BY: 2
PROJ. NO.: 157006121	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☑	Signature: Time: 1630	Signature: Time:
PROJ. NAME: EPFS GW project	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER	Printed Name: Date: Lisa Nunez 3-18-02	Printed Name: Date:
P.O. NO.:	METHANOL PRESERVATION ☐	Company: AMEC	Company:
SHIPPED VIA: Greyhound	COMMENTS: FIXED FEE ☐	See reverse side (Force Majeure)	
SAMPLE RECEIPT	RAMENTA 1 meter # (75155)	RECEIVED BY: 1	RECEIVED BY: (LAB) 2
NO. CONTAINERS: 3		Signature: Time:	Signature: Time: 1050
CUSTODY SEALS: Y / N / NA		Printed Name: Date:	Printed Name: Date: 3/19/02
RECEIVED INTACT: Y / N / NA		Company:	Pinnacle Laboratories Inc.
BLUE ICE/ICE: Y / N			

ATTACHMENT 2

FIELD DOCUMENTATION

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Delbert Bekis
Client Company: MWH
Site Name: Ramenta

Project No: 220013
Date: 01-03-03

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	1030	9.43	—	20.02	—	-	Sampled
MW-2	1140	10.60	—	—	—	—	
MW-3	1143	11.55	—	—	—	—	

COMMENTS:
MW-1 = Bailed 20.5 gallons to get sample that was representative of well. cloudy specks of dirt & grey material in water, thin sheet building. odor

Signature: Delbert Bekis

Date: 01-03-03

WELL DEVELOPMENT AND SAMPLING LOG

Project No: 220013 Project Name: San Juan River Basin Client: MWH

Location: Ramenta Well No: MW-1 Development ☐ Sampling ☑

Project Manager Delbert Bekis Date 01-03-03 Start Time 1028 Weather clear,

Depth to Water 9.43 Depth to Product — Product Thickness — Measuring Point TOC

Water Column Height 10.59 Well Dia. 4" TD 20.02

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer ☐ Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal ☐ Sabilization of Indicator Parameters ☐ Other _____

Gal/ft x ft of water	Water Volume In Well		Gal/oz to be removed
	Gallons	Ounces	
10.59 x .65	6.88 x 3		20.65

Time (military)	pH	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/ Flow rate
1028	8.65	1320	10.0				1	clear, grains of sand
	8.67	1270	10.0				2	
	8.70	1310	11.0				3	Cloudy, specs of
	8.60	~~1290~~ 1280	10.9				4	
	8.65	1310	11.8				5	grey material
	8.68	1360	12.7				6	
	8.73	1330	13.1				7	throughout
	8.85	1370	12.8				9	
	8.85	1370	13.4				11	bailing to
	8.87	1400	13.5				13	
	8.93	1450	14.2				15	get sample.
	8.98	1420	13.9				16	
	8.97	1420	13.5				17	
	8.99	1370	13.5				18	
	8.97	1070	13.7				19.5	
	8.97	1080	13.4				20	

Final:

Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow rate
1129	8.95	1090	13.6					20.5	sample

COMMENTS: observed by Malvina Clah NNEPA. and not on regular schedule, requested by Lynn Benally

INSTRUMENTATION: pH Meter ☑ _____ Temperature Meter ☑ _____

DO Monitor ☐ _____ Other ☐ _____

Conductivity Meter ☑ _____

Water Disposal KUTZ PLANT

Sample ID Ramenta MW-1 Sample Time 1129 BTEX ☑ VOCs ☐ Alkilinity ☐

TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Ammonia ☐ TKN ☐ NM WQCC Metals ☐

Total Phosphorus ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐

MS/MSD _____ BD _____ BD Name/Time _____ TB _____

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF INSPECTION

Address (EPA Regional Office)	Inspection Contractor	Firm To Be Inspected
Region 9 Environmental Inspection Agency 75 Hawthorne Street (WTR-9) San Francisco, CA 94105	NNEPA-UIC Program P.O Box 1999 Shiprock, NM 87420	LLIA Soil Field Services Contractor AE Schmidt Environmental 906 San Juan Blvd. Suite Farmington NM 87401

Date 1-3-02 Hour 11:34 AM	Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300 f et seg.).

Reason For Inspection

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable permit or rule.

UIC staff conducted an observation of the ground water sampling at Rementa EL AL lease, Monitor Well 1, J, Sec 13, T27N, R6W, San Juan County, New Mexico, Blanco Canyon Area, 20.5 gallons were bailed, temperature, conductivity, Ph, color were taken. Two samples were taken in sample bottles. On Monitor Well 2 water depth was taken only. Also on Monitor Well 2, water depth was taken only. Dilbert Bekis, AE Schmidt Environmental, was doing the sampling at the site.

Section 1445(b) of the SDWA (42 U.S.C. §300 j-4 (b) is quoted on the reverse of this form.

Receipt of this Notice of Inspection is hereby acknowledged.

Firm Representative	Date	Inspector
[illegible]	01-03-02	Patricia Clah Senior Environmental Technician

USEPA - Region IX (White) *NEPA-GPCP (Yellow)* *Operator (Pink)*

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL
Contract El Paso Corp. San Juan River Basin

Chain of Custody ID 030103 0g Em
Page 1 of 1
Air Bill No. 836381676750

MWH
Phone (801) 617-3200 FAX (801) 617-4200
MWH Contact Brian Buttars
Project San Juan River Basin
Project Number 220013
Date Due 21 days
Sampler's Name Delbert Belin
(print clearly)

Location ID	Sample ID	Depth Interval (ft)	Date Collected	Time Collected	Matrix[a]	Sampling Technique[b]	ANALYSES REQUESTED: BTEX SW-846 8021B	Alkalinity SM 2320B	TDS USEPA 160.1	NM WQCC Metals SW-846 6010B & 7470A	Cations SW-846 6010B	Anions USEPA 300.0	Nitrate USEPA 300.0	Nitrite USEPA 300.0				
GW-Ramenta	MW-1		01/03/03	1130	WG	B	V											

[a] Matrix:
SO – Soil
WS – Surface Water
WG – Ground Water
AA – Air
WQ – Trip Blank/ Equipment Blanks
WW – Wastewater

[b] Sampling Technique:
Composite=C
Grab=G
Hand Auger=HA
Submersible Pump=SP
Bladder Pump=BP
Bailer=B
Wellhead Faucet=WF
Hydropunch=HP

Location IDs:
Groundwater Sites=GW
Bisti=BI
Jaquez=JA
North Flare Pit=NF
South Flare Pit=SF
San Juan River Plant=SJ

Relinquished by/Affiliation	Received by/Affiliation	Date	Time
Delbert Belin / AESE		01/03/03	1450

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered
Notes:

2 Ambient or Chilled
Notes:

3 Temperature _____

4 Received Broken/Leaking (Improperly Sealed)
Y N
Notes:

5 Properly Preserved
Y N
Notes:

6 Received Within Holding Times
Y N
Notes:

COC Tape Was:

1 Present on Outer Package
Y N NA

2 Unbroken on Outer Package
Y N NA

3 Present on Sample
Y N NA

4 Unbroken on Sample
Y N NA
Notes:

Discrepancies Between Sample Labels and COC Record?
Y N
Notes:

FedEx Express **USA Airbill** FedEx Tracking Number 836381676750

0200

1 From (Please print and press hard)

Date 01/03/03 Sender's FedEx Account Number

Sender's Name Delbert Bekis Phone ( )

Company AESE

Address 906 San Juan Blvd. Ste. D.

Dept./Floor/Suite/Room

City Farmington State N.M ZIP 87401

2 Your Internal Billing Reference First 24 characters will appear on invoice. AFTODAY

3 To

Recipient's Name Eric Wendland Phone 909 590-1828

Company APCL

Address 13760 Magnolia Ave

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Dept./Floor/Suite/Room

City Chino State CA ZIP 91710

Try online shipping at fedex.com

By using this Airbill you agree to the service conditions on the back of this Airbill and in our current Service Guide, including terms that limit our liability.

Questions? Visit our Web site at fedex.com
or call 1.800.Go.FedEx® 800.463.3339.

4a Express Package Service *Packages up to 150 lbs.* Delivery commitment may be later in some areas

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [X] Other

6 Special Handling Include FedEx address in Section 3.

- [x] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 142127695 Exp. Date

Total Packages	Total Weight	Total Declared Value†	FedEx Use Only
1	11	$ .00	

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

446

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RETAIN THIS COPY FOR YOUR RECORDS.

Project No: 220013 Project Name: San Juan River Basin Client: [redacted]H

Location: Ramenta Well No: MW-1 Development ☐ Sampling ☑

Project Manager Ashley Lowe Date 09/17/02 Start Time 9:15 Weather 67° sunny

Depth to Water 9.705 Depth to Product NA ~~20.87~~ Product Thickness NA Measuring Point TOC

Water Column Height 10.312 Well Dia. 4" TD 10.312

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer ☑ Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal ☑ Sabilization of Indicator Parameters ☐ Other or bail dry

Gal/ft x ft of water	Water Volume In Well		Gal/oz to be removed
	Gallons	Ounces	
0.65 x 10.312	6.7 x 3		20.11 gal

Time (military)	pH	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/ Flow rate
9:38	5.50	774	17.4				1 gal	clear, slight odor
9:42	5.50	742	17.7				2	cloudy, dark brown
9:44	5.49	759	17.0				3	
9:46	5.51	742	17.0				5	light brown, strong odor
9:48	5.52	771	17.0				7	sheen/film on water
9:50	5.54	783	16.8				9	emptied buckets
9:55	5.58	797	17.3				11	
9:57	5.61	794	17.0				13	clearer water
10:02	5.63	799	17.0				15	
10:04	5.68	803	17.2				16	
10:06	5.67	801	17.1				17	"
10:09	5.67	802	17.2				18	"
10:11	5.69	800	17.2				19	good recovery
10:14	5.69	801	17.3				20.5	

Final:

Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow rate
10:18	5.69	801	17.3					20.5	

COMMENTS: Observed by Melvina Claw, Navajo EPA
Not on schedule, requested by Lynn Berally

INSTRUMENTATION: pH Meter ☑ _____ Temperature Meter ☑ _____

DO Monitor ☐ _____ Other ☐ _____

Conductivity Meter ☑ _____

Water Disposal Kutz Plant

Sample ID Ramenta MW-1 Sample Time 10:18 BTEX ☑ VOCs ☐ Alkilinity ☐

TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Ammonia ☐ TKN ☐ NM WQCC Metals ☐

Total Phosphorus ☐ _____ ☐ _____ ☐ _____ ☐ _____ ☐

MS/MSD _____ BD _____ BD Name/Time _____ TB TB020917-01

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: Ramerta

Project No: 220013
Date: 09/17/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	9:15	9.705	—	10.312	—	—	sampled
MW-2	10:32	10.387	—	12.221	—	—	
MW-3	10:37	11.960	—	12.680	—	—	

COMMENTS: Observed by Melvina Claw Navajo EPA.
Not on schedule - Requested by Lynn Benally

Signature: Ashley L Lowe Date: 09/17/02

CHAIN OF CUSTODY RECORD/LAB WORK REQUEST

LABORATORY APCL
Contract El Paso Corp., San Jaun River Basin

Chain of Custody ID 020917AE01
Page 1 of 1
Air Bill No. 836557901511

MWH
Phone (801) 617-3200 FAX (801) 617-4200
MWH Contact Brian Buttars
Project San Juan River Basin
Project Number 777013
Date Due 21 days
Sampler's Name Ashley Lowe
(print clearly)

Location ID	Sample ID	Depth Interval (ft)	Date Collected	Time Collected	Matrix [a]	Sampling Technique [b]	ANALYSES REQUESTED: BTEX SW-846 8021B	Alkalinity SM 2320B	TDS USEPA 160.1	NM WQCC Metals SW-846 6010B & 7470A	Cations SW-846 6010B	Anions USEPA 300.0	Nitrate USEPA 300.0	Nitrite USEPA 300.0				
GW Ramenta	MW-1		9/17/02	10:18	WG	B	✓											
GW Jennupah	MW-1		9/17/02	11:38	WG	B	✓											
TB02091701			9/17/02		W		✓											

[a] Matrix:
SO – Soil
WS – Surface Water
WG – Ground Water
AA – Air
WQ – Trip Blank/ Equipment Blanks
WW – Wastewater

[b] Sampling Technique:
Composite=C
Grab=G
Hand Auger=HA
Submersible Pump=SP
Bladder Pump=BP
Bailer=B
Wellhead Faucet=WF
Hydropunch=HP

Location IDs:
Groundwater Sites=GW
Bisti=BI
Jaquez=JA
North Flare Pit=NF
South Flare Pit=SF
San Juan River Plant=SJ

Relinquished by/Affiliation	Received by/Affiliation	Date	Time
Ashley L Lowe / AESE		9/17/02	14:00

LABORATORY USE ONLY

SAMPLES WERE:
1 Shipped or hand delivered
Notes:
2 Ambient or Chilled
Notes:
3 Temperature _____
4 Received Broken/Leaking (Improperly Sealed)
Y N
Notes:
5 Properly Preserved
Y N
Notes:
6 Received Within Holding Times
Y N
Notes:

COC Tape Was:
1 Present on Outer Package
Y N NA
2 Unbroken on Outer Package
Y N NA
3 Present on Sample
Y N NA
4 Unbroken on Sample
Y N NA
Notes:

Discrepancies Between Sample Labels and COC Record?
Y N
Notes:

U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF INSPECTION

Address (EPA Regional Office)	Inspection Contractor	Firm To Be Inspected
Region 9 Environmental Inspection Agency 75 Hawthorne Street (WTR-9) San Francisco, CA 94105	Navajo Nation EPA UIC P.O Box 1999 Shiprock NM 87420-1999	El Paso Field Service. 614 Reilly Ave. Farmington NM 87401

Date 9-17-02
Hour 11:50 AM

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300 f et seq.).

Reason For Inspection

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable permit or rule.

UIC staff witnessed and monitored: AESE groundwater sampling at: Remedial ETAL MW#1, 3, Sec 12 T29N, R9W, San Juan County NM. The time, amount, temperature, conductivity, pH, and color were observed. Two samples were taken in brown bottles for lab analysis. Also, water depths at MW2 10.387 and MW3 11.967, were completed by taken measurement.

UIC staff witnessed and monitored groundwater sampling at Jennapah #1, Sec 14 NE/4 (11), Sec 26 T29N, R9W San Juan County, NM. The time, amount, temperature conductivity, pH and color were observed. Two samples were taken in brown bottles for lab analysis. Also, water depths at MW2 26.412 and MW3 26.285 were completed by taken measurement.

Section 1445(b) of the SDWA (42 U.S.C. §300 j-4 (b)) is quoted on the reverse of this form.

Receipt of this Notice of Inspection is hereby acknowledged.

Firm Representative	Date	Inspector
[redacted] Lowe	9-17-02	Patricia Clark ET II

USEPA - Region IX (White) NEPA-GPCP (Yellow) Operator (Pink)

FedEx Express — USA Airbill

FedEx Tracking Number: 836557901511

Form I.D. No. 0200 — Sender's Copy

print and press hard.

17/02 Sender's FedEx Account Number 220929116

Ashley Lowe Phone (505) 566 9116

AESE

906 San Juan Blvd Ste D
Dept./Floor/Suite/Room

rmington State NM ZIP 87401

al Billing Reference
will appear on invoice.

Eric Wendland Phone (909) 590 1820

APCL

13760 Magnolia Ave
Ex location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

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hino State CA ZIP 91710

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4a Express Package Service — *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

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- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service — *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation: _____

5 Packaging — * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [x] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No.: 1421-27-695 Exp. Date:

Total Packages	Total Weight	Total Declared Value†	
1	5 lbs	$ .00	FedEx Use Only

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

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RETAIN THIS COPY FOR YOUR RECORDS.

☐ Development
☑ Purging

WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW 2 Page 1 of 1

Project Name EPFS GW project Project Manager Lisa Winn Project No. 15120001.21

Client Company El Paso Field Services

Site Name Ramenta Ft. AL #1 (75155) Site Address Rural San Juan CO.

Development Criteria

☑ (3) to 5 Casing Volumes of Water Removal
☑ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

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

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 15.37
Initial Depth to Water (feet) 10.03
Height of Water Column in Well (feet) 5.34
Diameter (inches): Well 2" Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	5.34	0.87 x 3	2.61
Gravel Pack			
Drilling Fluids			
Total			2.61

Instruments

	Serial No. (If applicable)
☑ pH Meter	YSI 63
☑ DO Monitor	YSI 95
☑ Conductivity Meter	YSI 63
☑ Temperature Meter	YSI 63
☐ Other _____	

Water Disposal

Knight Separator Bloomfield N.M.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6-13-02	1200		X				.75	.75			23.2	7.42	1264		Cloudy, Light Brown, no odor
	1202		X				.75	1.5			16.4	7.78	1149		"
	1204		X				.75	2.25			15.4	7.82	1115		"
	1206		X				.75	3			15.0	7.84	1090		"
	1209		X			10.69	.75	3.75			14.9	7.82	1094	3.13	no Change

Comments Sampled for BTEX 1215

Developer's Signature(s) [signature] 6-13-02 Reviewer [signature] Date 6/14/02

L:\forms\MW Dvlpmnt 2.dot 11/29/01

☐ Development
☑ Purging

WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW 3 Page 1 of 1

Project Name EPFS GW project Project Manager Lisa Linn Project No. 157000121

Client Company El Paso Field Services

Site Name Ramon TA ET Ah #1 (75155) Site Address Rural San Juan Co.

Development Criteria

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

Water Volume Calculation

Initial Depth of Well (feet) 20.32
Initial Depth to Water (feet) 11.63
Height of Water Column in Well (feet) 8.69
Diameter (inches): Well 2" Gravel Pack _____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	8.69	1.41 X 3	4.23
Gravel Pack			
Drilling Fluids			
Total			4.23

Instruments

	Serial No. (If applicable)
☑ pH Meter	YSI 63
☑ DO Monitor	YSI 95
☑ Conductivity Meter	YSI 63
☑ Temperature Meter	YSI 63
☐ Other _____	

Methods of Development

Pump: ☐ Centrifugal ☐ Submersible ☐ Peristaltic
Bailer: ☐ Bottom Valve ☐ Double Check Valve ☐ Stainless-steel Kemmerer
☐ Other _____

Water Disposal

Unit 2 Separator Bloomfield NM.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6-13-02	1235		X				1	1			17.2	7.73	826		Cloudy, Light Brown, NO Odor
	1237		X				1	2			17.3	7.20	837		" "
	1240		X				1	3			14.5	7.20	791		" "
	1242		X				1	4			15.8	7.68	806		" "
	1244		X			11.91	1	5			14.2	7.66	783	0.31	No Change

Comments Sampled for BTEX 1250

Developer's Signature(s) Chris A. May 6-13-02 Reviewer JWW Date 6/14/02

L:\forms\MW Dvlpmnt 2.dot 11/29/01

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 6-13-02 PAGE: 1 OF 1

PROJECT MANAGER: Lisa Winn

COMPANY: AMEC
ADDRESS: 2060 AFTON Place
Farmington NM 87401
PHONE: (505) 325 7928
FAX: (505) 326-5721

BILL TO: Scott Pope
COMPANY: El Paso Field Services
ADDRESS: 614 Reilly AVE
Farmington NM 87401

SAMPLE ID	DATE	TIME	MATRIX
RAM-0206-MW2	6-13-02	1215	H2O
RAM-0206-MW3	6-13-02	1250	H2O

	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:	NUMBER OF CONTAINERS
RAM-0206-MW2				X																							3
RAM-0206-MW3				X																							3

PROJECT INFORMATION

PROJ. NO.: 75700012.1
PROJ. NAME: EPFS GW Proj.
P.O. NO.:
SHIPPED VIA: Grey Hound

SAMPLE RECEIPT

NO. CONTAINERS:
CUSTODY SEAL:
RECEIVED INTACT:
PROPER CONT.:

PRIOR AUTHORIZATION IS REQUIRED FOR ALL PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☑
CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐

RAMENTA ET AL #1
Meter # (75155)

RELINQUISHED BY:

Signature: [signature] Time: 1600
Printed Name: Chris Moss Date: 6-13-02
Company: AMEC
See reverse side (Force Majeure)

RECEIVED BY:

Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY:

Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY: (LAB)

Signature:
Printed Name:

PLEASE FILL IN FORM IN COMPLETELY.

☐ Development
☑ Purging

WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW 1

Page 1 of 1

Project Name EPFS G.W. Project Project Manager LISA WINN Project No. 512000121

Client Company El Paso Field Services

Site Name RAMENTA ET AL #1 (95155) Site Address Rural SAN JAUN CO

Development Criteria

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

Methods of Development

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

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 20.08
Initial Depth to Water (feet) 9.32
Height of Water Column in Well (feet) 10.76
Diameter (inches): Well 4" Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	10.76	7.02x3	21.06
Gravel Pack			
Drilling Fluids			
Total			21.06

Instruments

	Serial No. (If applicable)
☑ pH Meter	YSI 63
☑ DO Monitor	YSI 95
☑ Conductivity Meter	YSI 63
☑ Temperature Meter	YSI 63
☐ Other _____	

Water Disposal

Knock Seperator Bloomfield N.M.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6-5-02	1013		X				4.25	4.25			14.5	7.93	893		Clear, Bottom ESS Odor
	1018		X				4.25	8.5			13.3	8.40	921		" "
	1023		X				4.25	12.75			13.1	8.47	925		" "
	1029		X				4.25	17			13.2	8.58	933		" "
	1034		X			16.04	4.25	21.25			12.9	8.52	936	2.44	No Change

Comments SAMPLED for BTEX 1040

Developer's Signature(s) [signature] 6-5-02 Reviewer [signature] Date 6/10/02

L:\forms\MW Dvlpmnt 2.dot 11/29/01

WELL OBSERVATION DATA

amec

Project Name: EPFS G.W. project

Project No.: 1517000121

Project Mngr: Lisa Winn

Task: 2

Client Co.: El paso Field Services

Date: 6-5-02

Site Name: RAMENTA ET AL #1 75155

Well or Piezometer MW	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Comments
MW 2	1100			9.97					
MW 3	1105			11.57					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments:

Signature: Chris A. McV

Date: 6-5-02

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE 6-5-02 PAGE: 1 OF 1

PLI Acct. Stat.

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

PROJECT MANAGER: LISA Lynn

COMPANY: AMEC
ADDRESS: 70 CO. AETON place
FARMINGTON NM 87401
PHONE: (505) 327-7928
FAX: (505) 320-5721

BILL TO: SCOTT POPE
COMPANY: El Paso Field Services
ADDRESS: 614 Reilly AVE
FARMINGTON NM 87401

ANALYSIS REQUEST

PLI SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
RAM-0206-MW1	6-5-02	1040	H_2O					X																								3

PROJECT INFORMATION	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS	RELINQUISHED BY: 1	RELINQUISHED BY: 2
PROJ. NO.: 151/00101	(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☑	Signature: Time: 1430	Signature: Time:
PROJ. NAME: EPFS GW PROJ	CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER	Printed Name: Date: LISA LYNN 6-6-02	Printed Name: Date:
P.O. NO.:	METHANOL PRESERVATION ☐	Company: AMEC	Company:
SHIPPED VIA: Greyhound	COMMENTS: FIXED FEE ☐	See reverse side (Force Majeure)	
SAMPLE RECEIPT	Ramenta ET AL #1	**RECEIVED BY: 1**	**RECEIVED BY: (LAB) 2**
NO. CONTAINERS	meter # (75155)	Signature: Time:	Signature: Time:
CUSTODY SEALS Y or N	Y/N/NA	Printed Name: Date:	Printed Name: Date:
RECEIVED INTACT		Company:	
BLUE ICE/ICE			

1240 1345

amec

☐ Development
☑ Purging

WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW 1 Page 1 of 1

Project Name EPFS G.W. project Project Manager LISA WINN Project No. 151700012?

Client Company El Paso Field Services

Site Name Remonta ET AL #1 (75155) Site Address Rural San Juan CO.

Development Criteria

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

Methods of Development

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

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 20.08
Initial Depth to Water (feet) 9.02
Height of Water Column in Well (feet) 11.06
Diameter (inches): Well 4" Gravel Pack _____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing	11.06	1.21 x 3	21.63
Gravel Pack			
Drilling Fluids			
Total			21.63

Instruments

	Serial No. (If applicable)
☑ pH Meter	xSI 63
☑ DO Monitor	xSI 95
☑ Conductivity Meter	xSI 63
☑ Temperature Meter	xSI 63
☐ Other _____	

Water Disposal

Knock Separator Bloomfield N.M.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
3-14-02	1257		X				4.5	4.5			12.4	7.91	841		Cloudy Rotten egg odor
	1302		X				4.5	9			10.7	8.35	930		" "
	1307		X				4.5	13.5			10.9	8.39	945		" "
	1312		X				4.5	18			11.1	9.47	962		" "
	1319		X			16.02	4.5	22.5			11.4	9.60	936	5.75	no change

Comments SAMPLED for BTEX 1326

Developer's Signature(s) _____ 3-18-02 Reviewer _____ Date 3/28/02

WELL OBSERVATION DAT

amec

Project Name: EpFS G.W. project

Project No.: 15/2000121

Project Mngr: Lisa Winn

Task: 2

Client Co.: El Paso Field Services

Date: 3-18-02

Site Name: REMENTA ET AL. #1 (75 155)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	[redacted]	[redacted]	Comments
MW 2	1336			9.61					
MW 3	1340			11.12					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments:

Signature: [signature]

Date: 3-18-02

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 3-18-02 PAGE: 1 OF 1

PROJECT MANAGER:	LISA Winn
COMPANY:	AMEC
ADDRESS:	2060 AFTON Place Farmington NM 87401
PHONE:	(505) 327-7928
FAX:	(505)
BILL TO:	SCOTT pope
COMPANY:	El paso Field Services
ADDRESS:	614 Reilly AVE Farmington NM. 87401

ANALYSIS REQUEST

LAB SAMPLE ID	SAMPLE ID	DATE	TIME	MATRIX	PRES.	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐ MTBE ☐ TMB ☐ PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides /PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
	REM-0203-MW1	3-14-02	1326	H2O						X																						2
	Trip Blank	3-4-02	1605	H2O						X																						1

PROJECT INFORMATION	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS
PROJ. NO.: 15170001211	(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☑
PROJ. NAME: EPFS GW project	CERTIFICATION REQUIRED: ☐ NM ☐ SDWA ☐ OTHER
P.O. NO.:	METHANOL PRESERVATION ☐
SHIPPED VIA: Greyhound	COMMENTS: FIXED FEE ☐

RAMENTA 1
meter # (75155)

SAMPLE RECEIPT		
NO. CONTAINERS		
CUSTODY SEALS	Y/N/NA	
RECEIVED INTACT		
BLUE ICE/ICE		

RELINQUISHED BY: 1	RELINQUISHED BY: 2
Signature: Time: 1630	Signature: Time:
Printed Name: Date: 3-15-02	Printed Name: Date:
Company: AMEC	Company:
See reverse side (Force Majeure)	
RECEIVED BY: 1	RECEIVED BY: 2
Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:
Company:	Company: