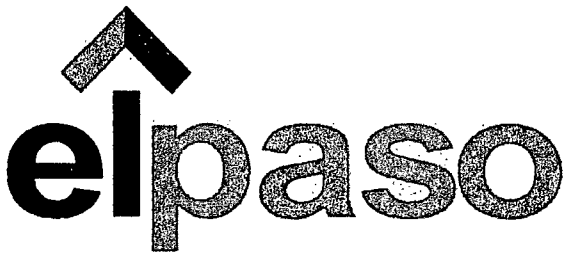
3R - 186

AGWMR

2009



El Paso Tennessee
Pipeline Company

San Juan Basin Pit Program
Groundwater Sites Project

Final 2009 Annual Report
Federal Sites (Volume 1)

April 2010

MWH

1801 California Street, Suite 2900
Denver, Colorado 80202

2009 ANNUAL GROUNDWATER REPORT
FEDERAL SITES VOLUME I

EL PASO TENNESSEE PIPELINE COMPANY

TABLE OF CONTENTS

METER or LINE ID	NMOCD CASE NO.	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
87640	3RP-155-0	Canada Mesa #2	24N	06W	24	I
89961	3RP-170-0	Fields A#7A	32N	11W	34	E
73220	3RP-068-0	Fogelson 4-1 Com. #14	29N	11W	4	P
89894	3RP-186-0	Hammond #41A	27N	08W	25	O
97213	3RP-190-0	Hamner #9	29N	09W	20	A
94715	3RP-196-0	James F. Bell #1E	30N	13W	10	P
89232	3RP-202-0	Johnston Fed #6A	31N	09W	35	F
LD072	3RP-204-0	K27 LD072	25N	06W	4	E
LD174	3RP-212-0	LAT L 40	28N	04W	13	H
LD151	3RP-213-0	Lat 0-21 Line Drip	30N	09W	12	O
94810	3RP-223-0	Miles Fed 1A	26N	07W	5	F
89620	3RP-235-0	Sandoval GC A #1A	30N	09W	35	C

* The Hamner #9 site was submitted for closure in January 2009 and is pending approval from NMOCD. There were no monitoring activities for this site in 2009.

elpaso MWH

MWH

BUILDING A BETTER WORLD

RECEIVED OCD

2010 APR 19 A 10:39

April 16, 2010

Mr. Glenn von Gonten
New Mexico Oil Conservation Division (NMOCD)
1220 South St., Francis Drive
Santa Fe, New Mexico 87505

RE: El Paso Tennessee Pipeline Company Pit Groundwater Remediation Sites 2009 Annual Reports

Dear Mr. Von Gonten:

MWH Americas, Inc., on behalf of El Paso Tennessee Pipeline Company (EPTPC), is submitting the enclosed 2009 Annual Reports for each of EPTPC's 21 remaining San Juan River Basin pit groundwater remediation sites. The reports present the 2009 sampling and product recovery data and include recommendations for 2010 activities at these sites.

The 2009 Annual Reports are divided into three volumes based on location type. The volumes are as follows:

Volume	Location Type
1	Federal Land
2	Non-Federal Land (Excl. Navajo Nation)
3	Navajo Nation

If you have any questions concerning the enclosed reports, please call either Doug Stavinoha of EPTPC (713-420-5150), Ian Yanagisawa of EPTPC (713-420-7361), or me (303-291-2276).

Sincerely,

Jed Smith
Project Manager

encl.

cc: Bill Freeman – NNEPA, Shiprock, NM (Volume 3 Only)
Bill Liese – BLM, Farmington, NM (Volume 1 Only)
Brandon Powell – NMOCD, Aztec, NM (Volumes 1, 2, and 3)
Doug Stavinoha – EPTPC (Volumes 1, 2, and 3)

1801 California Street
Suite 2900
Denver, Colorado 80202

TEL 303 291 2222
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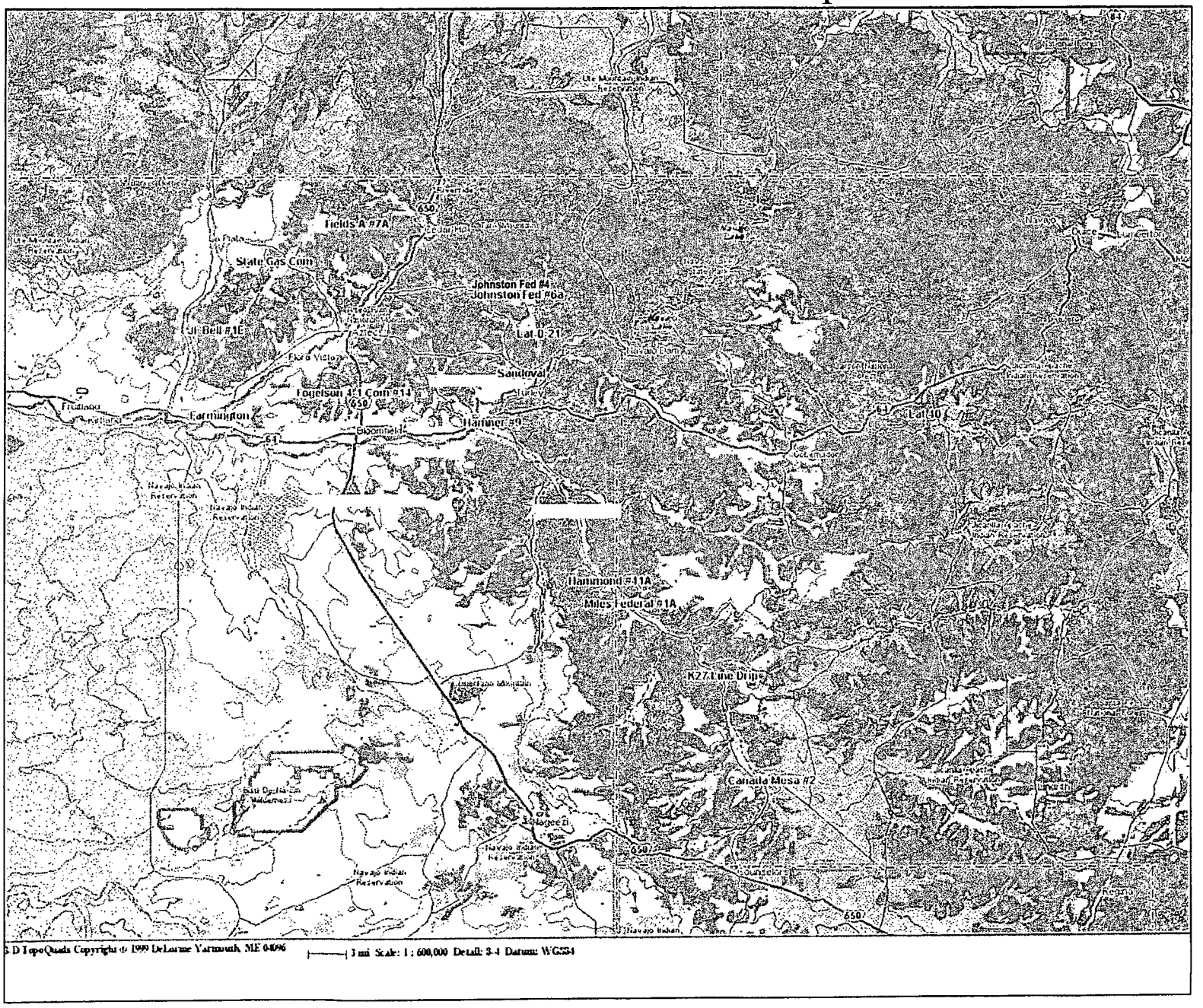
www.mwhglobal.com

LIST OF ACRONYMS

AMSL	above mean sea level
B	benzene
btoc	below top of casing
E	ethylbenzene
EPTPC	El Paso Tennessee Pipeline Company
ft	foot/feet
GWEL	groundwater elevation
ID	identification
MW	monitor well
NMWQCC	New Mexico Water Quality Control Commission
T	toluene
TOC	top of casing
NA	not applicable
NMOCD	New Mexico Oil Conservation Division
NS	not sampled
ORC	oxygen-releasing compound
µg/L	micrograms per liter
X	total xylenes

Federal Groundwater Site Map



3R186

EPTPC GROUNDWATER SITES
2009 ANNUAL GROUNDWATER REPORT

Hammond #41A
Meter Code: 89894

SITE DETAILS

Legal Description:	**Town:**	27N	**Range:**	8W	**Sec:**	25	**Unit:** O
NMOCD Haz Ranking:	40	**Land Type:**	Federal	**Operator:**	M&G Drilling Company		

PREVIOUS ACTIVITIES

Site Assessment:	6/94	**Excavation:**	7/94	**Soil Boring:**	7/95
Monitor Well:	5/97	**Geoprobe:**	11/96	**Additional MWs:**	9/99
Downgradient MWs:	9/99	**Replace MW:**	NA	**Quarterly Initiated:**	6/97
ORC Nutrient Injection:	7/98	**Re-Excavation:**	5/97	**PSH Removal Initiated:**	NA
Annual Initiated:	9/99	**Quarterly Resumed:**	NA	**PSH Removal in 2009?**	No

SUMMARY OF 2009 ACTIVITIES

MW-1: Semiannual water level monitoring (February and August) was performed during 2009.

MW-2: Semiannual water level monitoring (February and August) was performed during 2009.

MW-3: Semiannual water level monitoring (February and August) was performed during 2009.

TMW-1: Semiannual groundwater sampling (February and August) was performed during 2009.

Site-Wide Activities: No other activities were performed at this Site during 2009.

SITE MAPS

Site maps (February and August) are attached as Figures 1 and 2.

SUMMARY TABLES AND GRAPHS

- Historic analytical and water level data are summarized in Table 1 and presented graphically in Figures 3 through 6.

- The 2009 laboratory reports are presented in Attachment 1 (included on CD).
- The 2009 field documentation is presented in Attachment 2 (included on CD).

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this Site during 2009.

DISPOSITION OF GENERATED WASTES

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station.

ISOCONCENTRATION MAPS

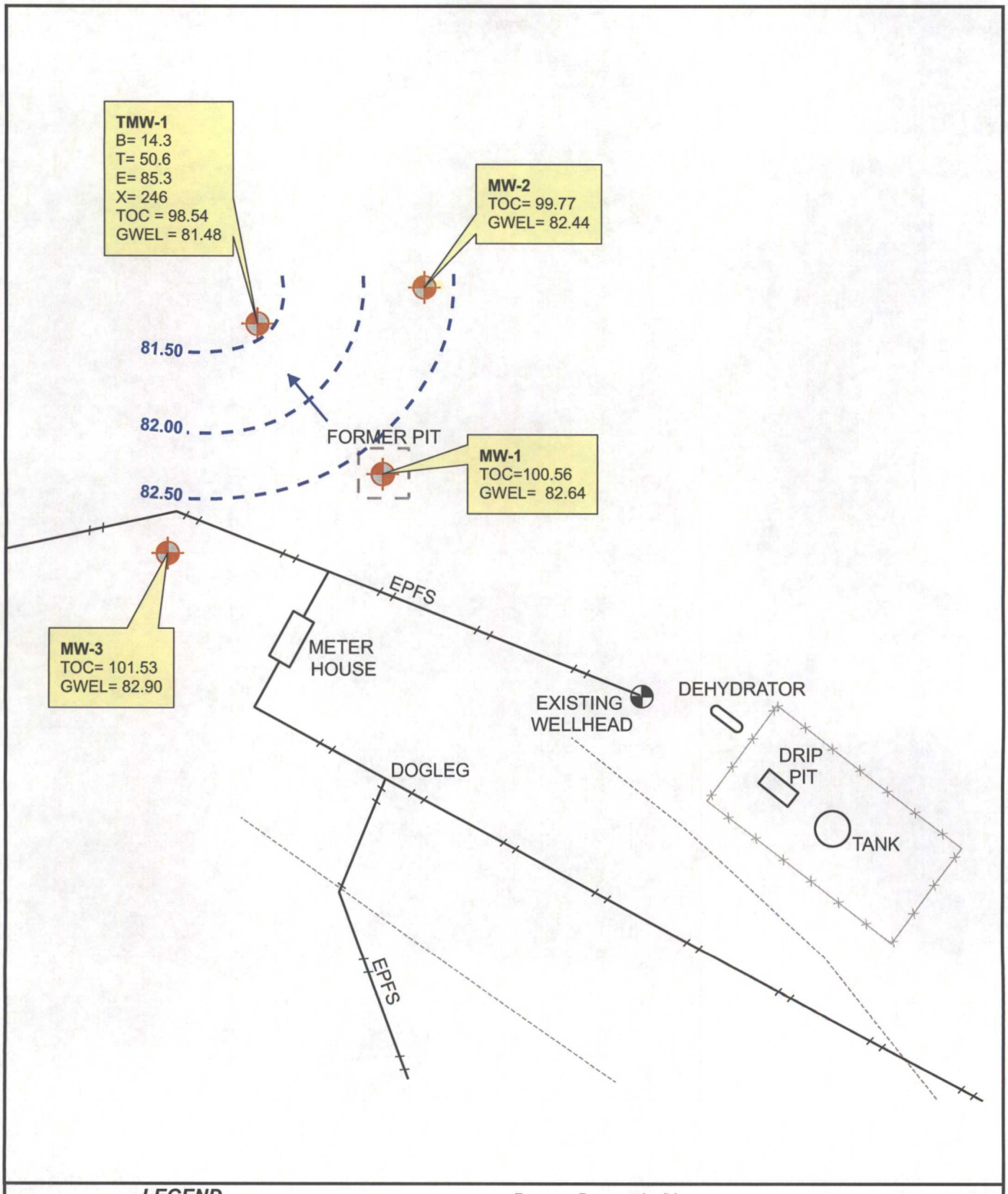
No isoconcentration maps were prepared for this Site; however, the attached Site maps present both the water level and analytical data collected during 2009.

RESULTS

- Groundwater flow at the Site is generally to the northwest.
- The low-level (i.e., close to or below the NMWQCC standards) BTEX concentrations remain steady in TMW-1. Benzene concentrations at TMW-1 were 14.3 µg/L and 2.7 µg/L in February and August 2009, respectively. These results straddled the NMWQCC benzene standard. Toluene, ethylbenzene, and total xylenes concentrations were below their respective standards during each sample event in 2009.
- As of 2002, wells MW-1, MW-2 and MW-3 have met four consecutive quarters of BTEX concentrations below NMWQCC standards. TMW-1 was installed in 2003, as requested by NMOCD.

RECOMMENDATIONS

- EPTPC recommends conducting semiannual sampling of TMW-1 until BTEX concentrations fall beneath their respective NMWQCC closure standards. At that time, quarterly sampling will be conducted until four clean quarters have been observed and the Site can be submitted for closure.
- Because historic samples indicated that MW-1, MW-2, and MW-3 have achieved closure standards, these wells will be sampled again only during final closure sampling.



LEGEND

MW-4	Existing Monitoring / Observation Well
→	Groundwater Flow Direction
—1275—	Potentiometric Surface Contour (Inferred Where Dashed)

B	Benzene (ug/L)
T	Toluene (ug/L)
E	Ethylbenzene (ug/L)
X	Total Xylenes (ug/L)
TOC	Top of Casing (ft. AMSL)
GWEL	Groundwater Elevation (ft. *)

* = Elevations in feet relative to a 100 ft benchmark.

N

0 10 20 40 Feet

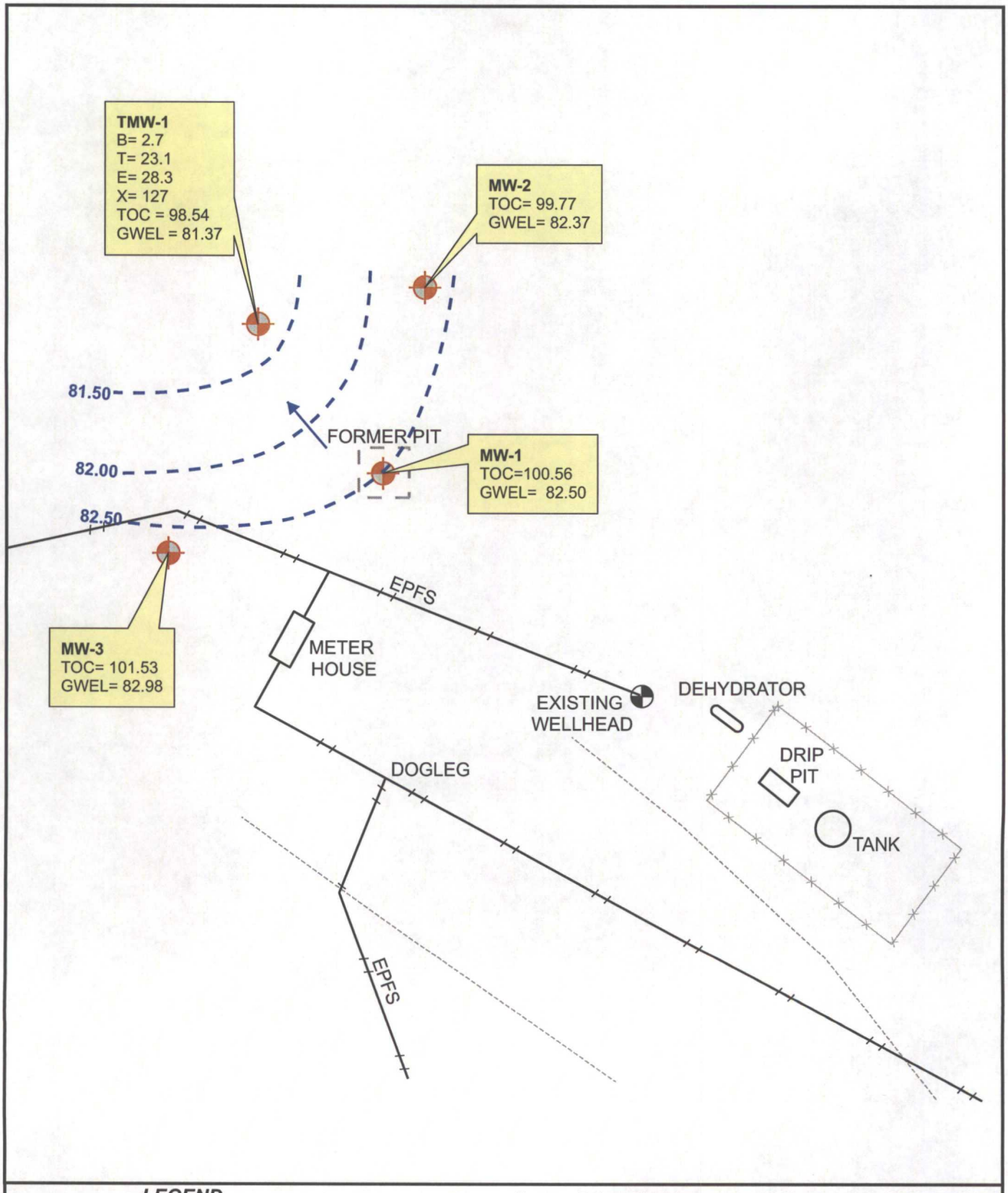
MWH

elpaso

PROJECT: HAMMOND #41A

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - February 17, 2009

FIGURE: 1



LEGEND

MW-4	Existing Monitoring / Observation Well
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* = Elevations in feet relative to a 100 ft benchmark.

N

0 10 20 40 Feet

MWH

elpaso

PROJECT: HAMMOND #41A

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - August 25, 2009

FIGURE: 2

FIGURE 3
SUMMARY OF GROUNDWATER BTEX CONCENTRATIONS AND FLUID LEVELS
HAMMOND #41A (METER #89894)
MW01

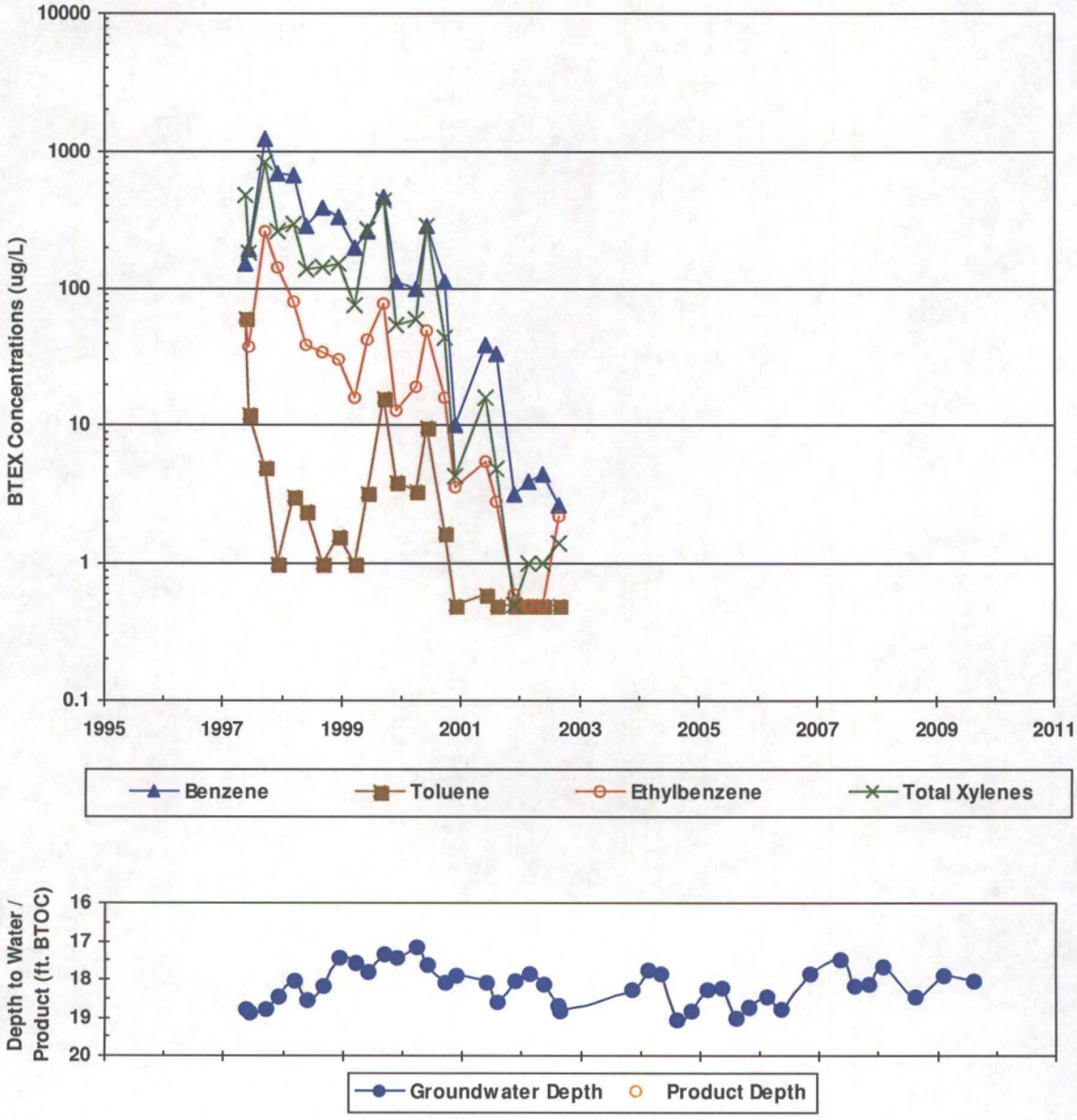


FIGURE 4
SUMMARY OF GROUNDWATER BTEX CONCENTRATIONS AND FLUID LEVELS
HAMMOND #41A (METER #89894)
MW02

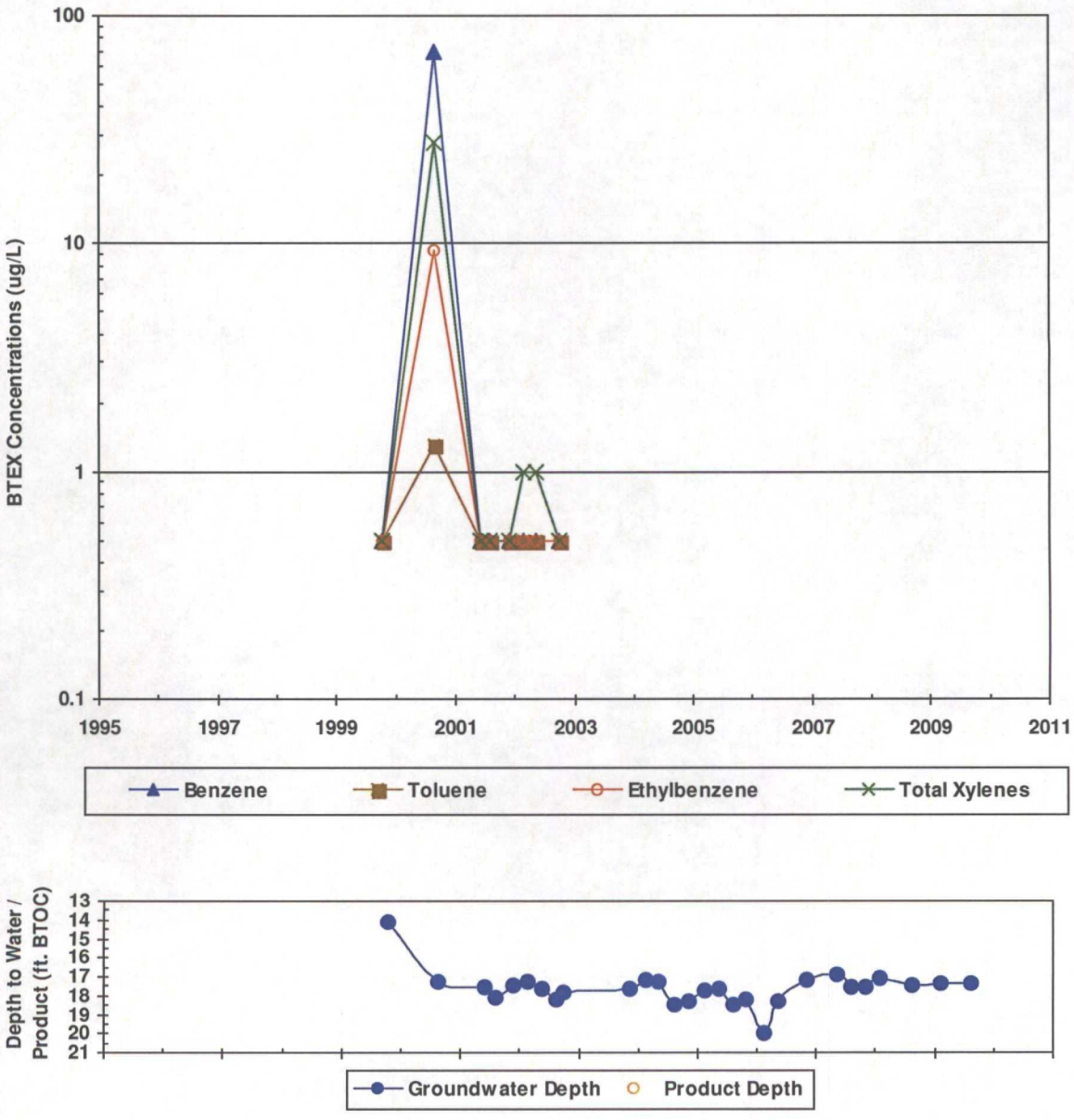
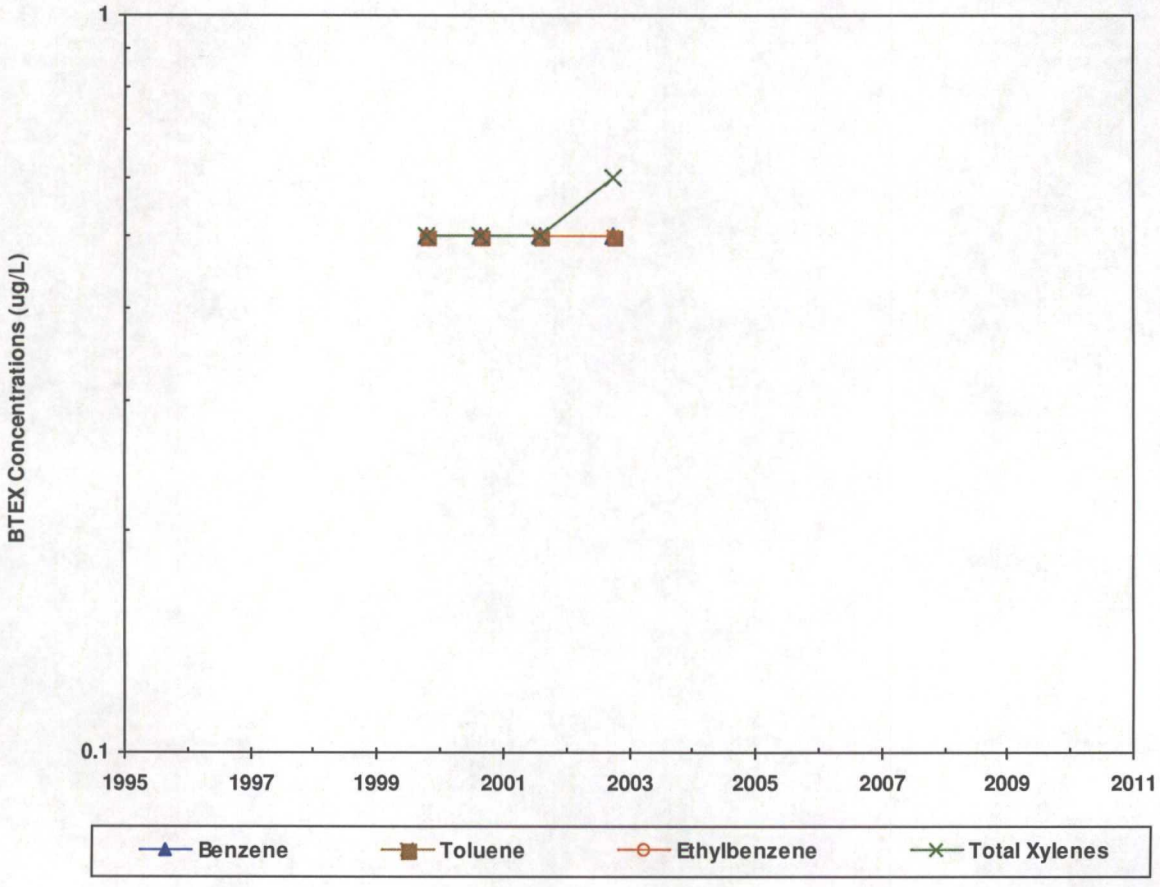


FIGURE 5
SUMMARY OF GROUNDWATER BTEX CONCENTRATIONS AND FLUID LEVELS
HAMMOND #41A (METER #89894)
MW03



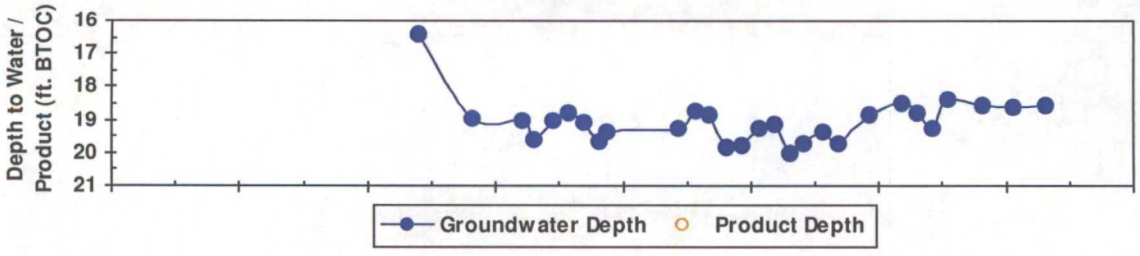


FIGURE 6
SUMMARY OF GROUNDWATER BTEX CONCENTRATIONS AND FLUID LEVELS
HAMMOND #41A (METER #89894)
TMW01

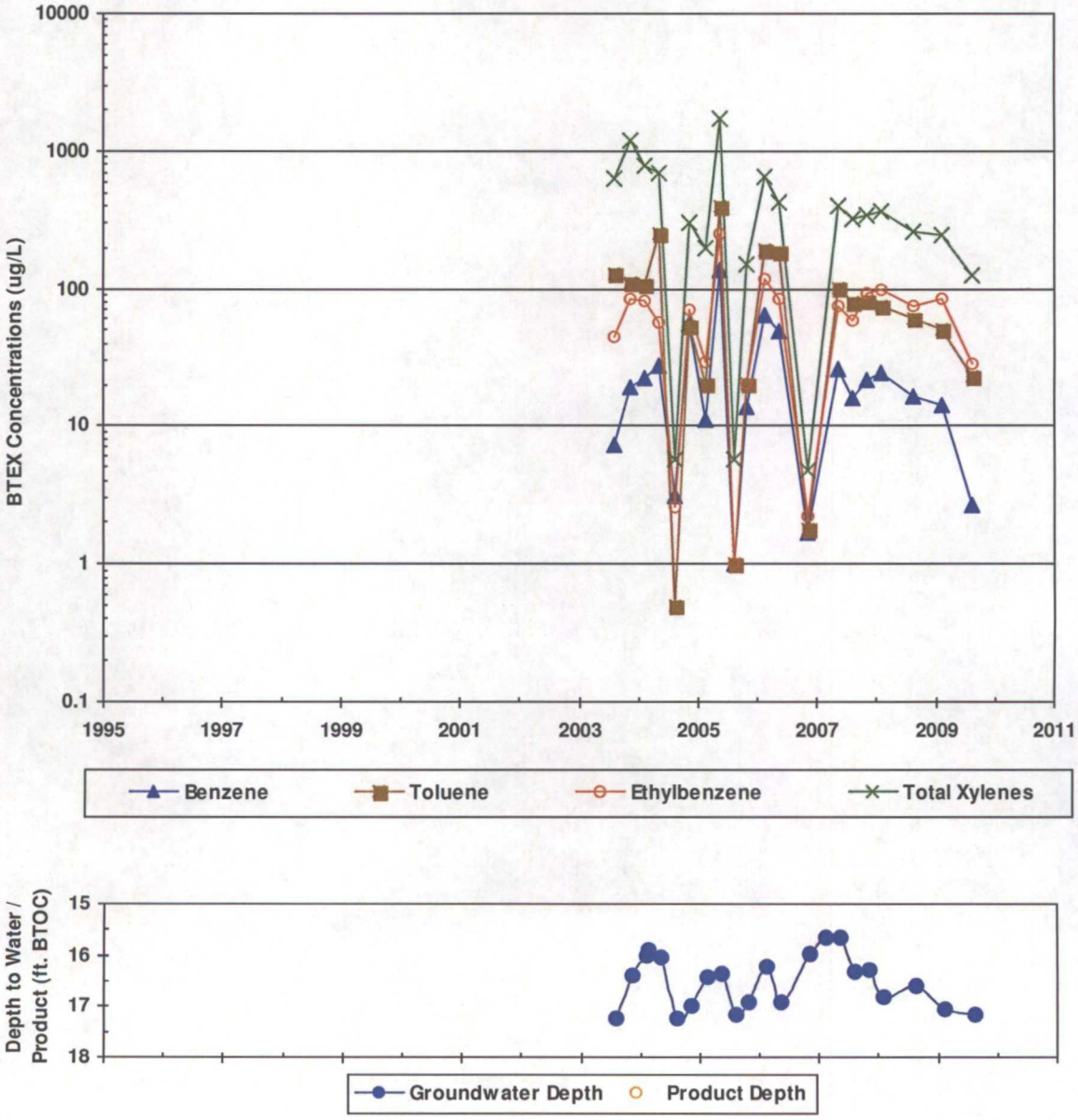


TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
HAMMOND #41A (METER #89894)

Monitor Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)	Corrected GW Elevation (Feet*)
NMWQCC GW Std.:		10	750	750	620		
MW01	5/21/1997	**150**	60.1	56.7	484	18.79	81.77
MW01	6/9/1997	**190**	12.3	36.9	181	18.89	81.67
MW01	9/17/1997	**1230**	<5.0	263	**830**	18.79	81.77
MW01	12/9/1997	**685**	<1.0	141	261	18.47	82.09
MW01	3/20/1998	**662**	3.06	78.7	292	18.05	82.51
MW01	6/4/1998	**286**	2.43	38.4	140	18.54	82.02
MW01	9/10/1998	**391**	<1.0	34.0	144	18.19	82.37
MW01	12/17/1998	**330**	1.6	30	150	17.42	83.14
MW01	3/23/1999	**197**	<1.0	15.8	74.1	17.56	83.00
MW01	6/11/1999	**260**	3.3	42.0	270	17.80	82.76
MW01	9/20/1999	**460**	16	78.0	440	17.36	83.20
MW01	12/9/1999	**110**	3.9	13.0	53	17.42	83.14
MW01	3/31/2000	**98**	3.4	19.0	59	17.15	83.41
MW01	6/9/2000	**290**	9.7	49.0	290	17.64	82.92
MW01	9/21/2000	**110**	1.7	16.0	44	18.10	82.46
MW01	12/5/2000	10	<0.5	3.6	4.3	17.91	82.65
MW01	6/4/2001	**39**	0.6	5.5	16	18.09	82.47
MW01	8/7/2001	**33**	<0.5	2.8	4.9	18.62	81.94
MW01	11/27/2001	3.2	<0.5	0.6	<0.5	18.06	82.50
MW01	2/25/2002	3.9	<0.5	0.5	<1.0	17.86	82.70
MW01	5/21/2002	4.4	<0.5	<0.5	<1.0	18.16	82.40
MW01	9/5/2002	2.7	0.5	2.2	1.4	18.82	81.74
MW02	10/15/1999	<0.5	<0.5	<0.5	<0.5	14.12	85.65
MW02	8/28/2000	**69**	1.3	9.4	28	17.32	82.45
MW02	6/4/2001	<0.5	<0.5	<0.5	<0.5	17.54	82.23
MW02	8/7/2001	<0.5	<0.5	<0.5	<0.5	18.08	81.69
MW02	11/27/2001	<0.5	<0.5	<0.5	<0.5	17.47	82.30
MW02	2/25/2002	<0.5	<0.5	<0.5	<1.0	17.30	82.47
MW02	5/21/2002	<0.5	<0.5	<0.5	<1.0	17.62	82.15
MW02	10/8/2002	<0.5	<0.5	<0.5	0.5	17.80	81.97
MW03	10/15/1999	<0.5	<0.5	<0.5	<0.5	16.43	85.10
MW03	8/28/2000	<0.5	<0.5	<0.5	<0.5	18.96	82.57
MW03	8/7/2001	<0.5	<0.5	<0.5	<0.5	19.58	81.95
MW03	10/8/2002	<0.5	<0.5	<0.5	0.6	19.38	82.15

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
HAMMOND #41A (METER #89894)

Monitor Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)	Corrected GW Elevation (Feet*)
NMWQCC GW Std.:		**10**	**750**	**750**	**620**		
TMW01	8/13/2003	7.3	128	44.8	**625**	17.22	81.32
TMW01	11/15/2003	**19.2**	113	84.6	**1200**	16.40	82.14
TMW01	2/17/2004	**22.3**	109	83.2	**774**	16.01	82.53
TMW01	5/11/2004	**27.2**	255	56.6	**685**	16.03	82.51
TMW01	8/19/2004	3.1	<0.5	2.6	5.6	17.24	81.30
TMW01	11/16/2004	**55.2**	53.3	70.7	306	17.00	81.54
TMW01	2/21/2005	**11.2**	20.2	28.9	196	16.43	82.11
TMW01	5/18/2005	**140**	398	252	**1710**	16.35	82.19
TMW01	8/23/2005	<1.0	<1.0	<1.0	5.6	17.18	81.36
TMW01	11/8/2005	**13.9**	20.1	20.1	149	16.91	81.63
TMW01	2/23/2006	**64.2**	195	118	**641**	16.23	82.31
TMW01	5/23/2006	**49.2**	188	85.1	429	16.92	81.62
TMW01	11/8/2006	1.7	1.8	2.2	4.7	15.97	82.57
TMW01	5/24/2007	**25.8**	103	74.3	399	15.66	82.88
TMW01	8/21/2007	**15.9**	81.0	59.6	322	16.33	82.21
TMW01	11/13/2007	**21.7**	83.0	93.4	343	16.30	82.24
TMW01	2/12/2008	**24.2**	74.5	99.1	362	16.81	81.73
TMW01	8/26/2008	**16.7**	60.6	74.7	258	16.62	81.92
TMW01	2/17/2009	**14.3**	50.6	85.3	246	17.06	81.48
TMW01	8/25/2009	2.7	23.1	28.3	127	17.17	81.37

Notes:

Results shown in bold typeface exceed their respective New Mexico Water Quality Control Commission standards.

"J" = result is qualified as estimated. See laboratory report and/or supplemental data validation report for further detail.
"<" = analyte was not detected at the indicated reporting limit.
Static groundwater elevations have been corrected for product thickness where applicable. Specific gravity of 0.8 used.

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: SJB Groundwater Client: MWH/EL Paso
Location: Hammond 41A Well No: TMW-1 Development **Sampling**
Project Manager ALA Date 02/17/09 Start Time 1012 Weather clear 30s
Depth to Water 16.06 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 8.97 Well Dia. 2"

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

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

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	**Gal**/oz to be removed
8.97 x 0.16	1.43 x 3		4.29

Time (military)	pH (su)	SC (ms)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1029	**7.54**	**2.62**	**56.3**				**0.25**	Clear
	7.58	**2.74**	**57.7**				**.5**	Light gray
	7.57	**2.71**	**57.2**				**.75**	Gray
	7.62	**2.66**	**57.6**				**1.0**	Gray
	7.56	**2.69**	**56.8**				**2.0**	Dark gray
	7.53	**2.64**	**56.8**				**3.0**	Dark gray sheen
	7.52	**2.71**	**56.8**				**4.0**	Dark gray, sheen
	7.52	**2.74**	**57.2**				**4.25**	Dark gray, sheen

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1000	**7.49**	**2.71**	**56.7**					**4.5 g**	Dark gray sheen

COMMENTS: well is slightly bent – has been run into

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Hammond 41 A TMW-1 Sample Time 1052

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 170209tb01

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

WELL DEVELOPMENT AND SAMPLING LOG

Project Name: San Juan Basin | Location: Hammond #41A | Well No: TMW-1
Client: MWH | Date: 8/25/2009 | Time: 11:44
Project Manager: Ashley Ager | Sampler's Name: Troy Urban

Measuring Point: TOC | Depth to Water: 17.17 ft | Depth to Product: ft
Well Diameter: 2" | Total Depth: 25.03 ft | Product Thickness: ft
Water Column Height: 7.86 ft

Sampling Method: ☐ Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other
☑ Bottom Valve Bailer ☐ Double Check Valve Bailer

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

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Volume to be removed
7.86 x .16	1.26 x 3		3.77 gal

Time (military)	pH (su)	SC (ms)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. gal	Comments/Flow Rate
11:49	7.38	1.56	61.0				0.25	light tank, HC odor
	7.38	1.64	60.8				0.5	dark gray, sheen
	7.39	1.60	60.8				0.75	dark gray, sheen, HC odor
	7.37	1.63	60.4				1	dark gray, sheen, HC odor
	7.46	1.64	60.6				2	dark gray, sheen, HC odor
	7.55	1.64	60.1				3	
	7.62	1.59	60.4				3.5	
	7.62	1.59	59.4				3.75	
Final: 12:13	7.67	1.54	59.4				4	dark gray

COMMENTS: Duplicate sample collected.

Instrumentation: ☑ pH Meter ☐ DO Monitor ☑ Conductivity Meter ☑ Temperature Meter ☐ Other

Water Disposal: Rio Vista

Sample ID: TMW-1 Sample Time: 12:15

Analysis Requested: ☑ BTEX ☐ VOCs ☐ Alkalinity ☐ TDS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Metals
☐ Other

Trip Blank: 25082009TB01 Duplicate Sample: MW-5

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

WATER LEVEL DATA

Project Name: San Juan Basin Groundwater **Date:** 02/17/2009
Project Manager: Ashley Ager
Client: MWH
Site Name: Hammond #41A

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	9:57 AM	-	17.92	-	-	
MW-2		-	17.33	-	-	
MW-3		-	18.63	-	-	
TMW-1		-	16.06	-	-	Well is slightly damaged - has been run into

Comments
Still able to sample TMW-1. Well is only slightly bent.

Signature: *Ashley L. Ager* Date: 02/17/2009

Lodestar Services, Incorporated
PO Box 4465, Durango, CO 81302 Office (970) 946-1093

WATER LEVEL DATA

Project Name: San Juan Basin Groundwater **Date:** 08/25/2009
Project Manager: Ashley Ager
Client: MWH
Site Name: Hammond #41A

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	########	-	18.06	-	-	
MW-2		-	17.4	-	-	
MW-3		-	18.55	-	-	
TMW-1		-	17.17	-	-	Well is slightly damaged - has been run into

Comments
Still able to sample TMW-1. Well is only slightly bent.

Signature: *Ashley L. Ager* Date: 08/25/2009

Gulf Coast ACCUTEST Laboratories

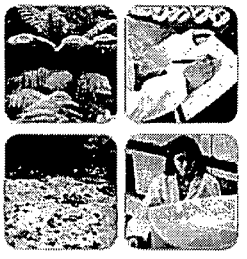
IT'S ALL IN THE CHEMISTRY

02/24/09

Technical Report for

Montgomery Watson

San Juan Basin Pit Groundwater Remediation 2008-2009



Accutest Job Number: T25736

Sampling Date: 02/17/09

Report to:

MWH Americas
1801 California St. Suite 2900
Denver, CO 80202
jed.smith@mwhglobal.com; daniel.a.wade@mwhglobal.com;
craig.moore@mwhglobal.com
ATTN: Jed Smith

Total number of pages in report: 17

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul K Canevaro

Paul Canevaro
Laboratory Director

Client Service contact: William Reeves 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004) OK (9103) UT(7132714700)

Sections: 1 2 3 4 5

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Sample Summary

Montgomery Watson

Job No: T25736

San Juan Basin Pit Groundwater Remediation 2008-2009

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
T25736-1	02/17/09	10:52	TU	02/18/09	AQ	Ground Water	(HAMMOND 41A) TMW-1
T25736-2	02/17/09	07:00	TU	02/18/09	AQ	Trip Blank Water	170209TB02

ACCUTEST. Laboratories

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T25736
Site:	San Juan Basin Pit Groundwater Remediation 2008-2009	**Report Date**	2/24/2009 4:40:13 PM

1 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 02/17/2009 and were received at Accutest on 02/18/2009 properly preserved, at 4 Deg. C and intact. These Samples received an Accutest job number of T25736. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GKK1428

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ **Batch ID:** GKK1431

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T25737-4MS, T25737-4MSD were used as the QC samples indicated.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	(HAMMOND 41A) TMW-1		
Lab Sample ID:	T25736-1	Date Sampled:	02/17/09
Matrix:	AQ - Ground Water	Date Received:	02/18/09
Method:	SW846 8021B	Percent Solids:	n/a
Project:	San Juan Basin Pit Groundwater Remediation 2008-2009		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK029394.D	1	02/20/09	FI	n/a	n/a	GKK1431
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	14.3	1.0	0.21	ug/l	
108-88-3	Toluene	50.6	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	85.3	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	246	2.0	0.55	ug/l	
95-47-6	o-Xylene	124	1.0	0.55	ug/l	
	m,p-Xylene	121	1.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		58-125%
98-08-8	aaa-Trifluorotoluene	83%		73-139%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	170209TB02		
Lab Sample ID:	T25736-2	Date Sampled:	02/17/09
Matrix:	AQ - Trip Blank Water	Date Received:	02/18/09
Method:	SW846 8021B	Percent Solids:	n/a
Project:	San Juan Basin Pit Groundwater Remediation 2008-2009		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK029342.D	1	02/18/09	FI	n/a	n/a	GKK1428
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.55	ug/l	
95-47-6	o-Xylene	ND	1.0	0.55	ug/l	
	m,p-Xylene	ND	1.0	0.66	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		58-125%
98-08-8	aaa-Trifluorotoluene	78%		73-139%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories
10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

Page ____ of

FED-EX Tracking # 868932716040 | Bottle Order Control #
Accutest Quote # | Accutest Job # T25736

Client / Reporting Information

Company Name: MWH
Project Contact: Jed Smith | E-Mail: jed.smith@mwhglobal.com
Address: 1801 California Street, Suite 2900
City: Denver | State: CO | Zip: 80202
Phone No.: 303-291-2276 | Fax No.:
Samplers's Name: Troy Urban

Project Information

Project Name / No.: EPTPC San Juan Basin Pit GW Remediation 2008-2009
Bill to: El Paso Corp | Invoice Attn.: Norma Ramos
Address: 1001 Louisiana Street, Rm S1904B
City: Houston | State: TX | Zip: 77002
Phone No.: | Fax No.:
Client Purchase Order #

Requested Analyses

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Wastewater; SO - Soil; SL - Sludge; OI - Oil; LIQ - Liquid; SOL - Other Solid

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles: HCl	MeOH	HNO3	H2SO4	ENCORE	NaHSO4	NaOH	NONE	BTEX (8021B)	LAB USE ONLY
1	(Hammond 41A) TMW-1	021709	1052	GW	3	X								X	
2	170209TB02	021709	0700	GW	2	X								X	

Turnaround Time (Business days)

- [X] 10 Day *STANDARD* — Approved By:/ Date:
- [ ] 7 Day
- [ ] 4 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*
- [ ] Other

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Troy Urban 2/17/09	1625	1	2	2-18-09 00	
3	Relinquished By:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice X Cooler Temp. 4.0 °C

4.1 4

T25736: Chain of Custody
Page 1 of 3

SAMPLE INSPECTION FORM

Accutest Job Number: T25736 Client: MWH Date/Time Received: 2-18-9 900

# of Coolers Received: 1 Thermometer #: IR-1 Temperature Adjustment Factor: -0.4

Cooler Temps: #1: 4.0 #2: _____ #3: _____ #4: _____ #5: _____ #6: _____ #7: _____ #8: _____

Method of Delivery: (FEDEX) UPS Accutest Courier Greyhound Delivery Other

Airbill Numbers: 868 9-3271-6040

COOLER INFORMATION
- [ ] Custody seal missing or not intact
- [ ] Temperature criteria not met
- [ ] Wet ice received in cooler

CHAIN OF CUSTODY
- [ ] Chain of Custody not received
- [ ] Sample D/T unclear or missing
- [ ] Analyses unclear or missing
- [ ] COC not properly executed

SAMPLE INFORMATION
- [ ] Sample containers received broken
- [ ] VOC vials have headspace
- [ ] Sample labels missing or illegible
- [ ] ID on COC does not match label(s)
- [ ] D/T on COC does not match label(s)
- [ ] Sample/Bottles rcvd but no analysis on COC
- [ ] Sample listed on COC, but not received
- [ ] Bottles missing for requested analysis
- [ ] Insufficient volume for analysis
- [ ] Sample received improperly preserved

TRIP BLANK INFORMATION
- [ ] Trip Blank on COC but not received
- [ ] Trip Blank received but not on COC
- [ ] Trip Blank not intact
- [ ] Received Water Trip Blank
- [ ] Received Soil TB

Number of Encores? _____
Number of 5035 kits? _____
Number of lab-filtered metals? _____

Summary of Discrepancies:

TECHNICIAN SIGNATURE/DATE: 2-13-9

INFORMATION AND SAMPLE LABELING VERIFIED BY:

CORRECTIVE ACTIONS

Client Representative Notified: _____ **Date:** _____

By Accutest Representative: _____ **Via:** Phone Email

Client Instructions:

i:\mwalker\forms\samplemanagement

4.1 4

T25736: Chain of Custody
Page 2 of 3

SAMPLE RECEIPT LOG

JOB #: T25736 DATE/TIME RECEIVED: 2-18-9 900

CLIENT: MWH INITIALS: EHC

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH
1	1	Hammond YIA TMW-1	2-17-9 1054	W	40ml	1-3	VR	1 (2) 3 4 5 6 7 8	<2 >12
1	2	Trip Blank	—	—	40ml	1-2	"	1 (2) 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12

EHC 2-18-9

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

T25736: Chain of Custody
Page 3 of 3

GC Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T25736
Account: MWHCODE Montgomery Watson
Project: San Juan Basin Pit Groundwater Remediation 2008-2009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1428-MB	KK029331.D	1	02/18/09	FI	n/a	n/a	GKK1428

The QC reported here applies to the following samples: Method: SW846 8021B

T25736-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.55	ug/l	
95-47-6	o-Xylene	ND	1.0	0.55	ug/l	
	m,p-Xylene	ND	1.0	0.66	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	88%	58-125%
98-08-8	aaa-Trifluorotoluene	78%	73-139%

Method Blank Summary

Job Number: T25736
Account: MWHCODE Montgomery Watson
Project: San Juan Basin Pit Groundwater Remediation 2008-2009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1431-MB	KK029390.D	1	02/20/09	FI	n/a	n/a	GKK1431

The QC reported here applies to the following samples: Method: SW846 8021B

T25736-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.23	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.55	ug/l	
95-47-6	o-Xylene	ND	1.0	0.55	ug/l	
	m,p-Xylene	ND	1.0	0.66	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	90%	58-125%
98-08-8	aaa-Trifluorotoluene	74%	73-139%

Blank Spike/Blank Spike Duplicate Summary

Job Number: T25736
Account: MWHCODE Montgomery Watson
Project: San Juan Basin Pit Groundwater Remediation 2008-2009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1428-BS	KK029327.D	1	02/18/09	FI	n/a	n/a	GKK1428
GKK1428-BSD	KK029328.D	1	02/18/09	FI	n/a	n/a	GKK1428

The QC reported here applies to the following samples: Method: SW846 8021B

T25736-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	20.3	102	19.8	99	2	86-121/30
100-41-4	Ethylbenzene	20	19.7	99	19.0	95	4	81-116/30
108-88-3	Toluene	20	19.5	98	18.9	95	3	87-117/30
1330-20-7	Xylenes (total)	60	58.8	98	56.9	95	3	85-115/30
95-47-6	o-Xylene	20	19.2	96	18.7	94	3	87-116/30
	m,p-Xylene	40	39.6	99	38.2	96	4	84-116/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	91%	90%	58-125%
98-08-8	aaa-Trifluorotoluene	80%	79%	73-139%

Blank Spike Summary

Job Number: T25736
Account: MWHCODE Montgomery Watson
Project: San Juan Basin Pit Groundwater Remediation 2008-2009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1431-BS	KK029386.D	1	02/20/09	FI	n/a	n/a	GKK1431

The QC reported here applies to the following samples: Method: SW846 8021B

T25736-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	86-121
100-41-4	Ethylbenzene	20	19.4	97	81-116
108-88-3	Toluene	20	19.1	96	87-117
1330-20-7	Xylenes (total)	60	57.9	97	85-115
95-47-6	o-Xylene	20	18.9	95	87-116
	m,p-Xylene	40	38.9	97	84-116

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	90%	58-125%
98-08-8	aaa-Trifluorotoluene	73%	73-139%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T25736
Account: MWHCODE Montgomery Watson
Project: San Juan Basin Pit Groundwater Remediation 2008-2009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T25737-4MS	KK029396.D	1	02/20/09	FI	n/a	n/a	GKK1431
T25737-4MSD	KK029397.D	1	02/20/09	FI	n/a	n/a	GKK1431
T25737-4	KK029391.D	1	02/20/09	FI	n/a	n/a	GKK1431

The QC reported here applies to the following samples: Method: SW846 8021B

T25736-1

CAS No.	Compound	T25737-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1.5		20	23.5	110	22.7	106	3	86-121/19
100-41-4	Ethylbenzene	ND		20	21.9	110	21.1	106	4	81-116/14
108-88-3	Toluene	0.30	J	20	21.4	106	20.7	102	3	87-117/16
1330-20-7	Xylenes (total)	2.5		60	67.7	109	64.2	103	5	85-115/12
95-47-6	o-Xylene	ND		20	21.7	109	21.0	105	3	87-116/16
	m;p-Xylene	2.2		40	46.0	110	43.2	103	6	84-116/13

CAS No.	Surrogate Recoveries	MS	MSD	T25737-4	Limits
460-00-4	4-Bromofluorobenzene	92%	92%	90%	58-125%
98-08-8	aaa-Trifluorotoluene	74%	75%	74%	73-139%

Gulf Coast ACCUTEST Laboratories

LET'S ALL IN THE CHEMISTRY

09/18/09

Technical Report for

Montgomery Watson

San Juan Basin Pit Groundwater Remediation

2009-2010 West-ALAB-Ground Rem 007

Accutest Job Number: T36560

Sampling Date: 08/25/09

Report to:

MWH Americas

jed.smith@mwhglobal.com

ATTN: Jed Smith

Total number of pages in report: **12**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul K Canevaro

Paul Canevaro
Laboratory Director

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Georgia Jones 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004) OK (9103) UT(7132714700)

Test results relate only to samples analyzed.

Sections: 1 2 3 4

Table of Contents

Sample Summary

Montgomery Watson

Job No: T36560

San Juan Basin Pit Groundwater Remediation
Project No: 2009-2010 West-ALAB-Ground Rem 007

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T36560-1	08/25/09	12:15	TU	08/28/09	AQ	Ground Water	HAMMOND 41A TMW-1
T36560-2	08/25/09	12:00	TU	08/28/09	AQ	Ground Water	HAMMOND 41A MW-5
T36560-3	08/25/09	07:00	TU	08/28/09	AQ	Trip Blank Water	250809TB01

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T36560
Site:	San Juan Basin Pit Groundwater Remediation 2008-2009	**Report Date**	9/10/2009 7:29:25 PM

2 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 08/25/2009 and were received at Accutest on 08/28/2009 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of T36560. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GKK1550

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T36857-1MS, T36857-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Ethylbenzene are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Ethylbenzene are outside control limits. Probable cause due to matrix interference.

Matrix AQ **Batch ID:** GKK1551

- All method blanks for this batch meet method specific criteria.
- All samples were analyzed within the recommended method holding time.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	HAMMOND 41A TMW-1		
Lab Sample ID:	T36560-1	Date Sampled:	08/25/09
Matrix:	AQ - Ground Water	Date Received:	08/28/09
Method:	SW846 8021B	Percent Solids:	n/a
Project:	San Juan Basin Pit Groundwater Remediation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK032404.D	1	09/03/09	FI	n/a	n/a	GKK1550
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.7	1.0	0.36	ug/l	
108-88-3	Toluene	23.1	1.0	0.28	ug/l	
100-41-4	Ethylbenzene	28.3	1.0	0.25	ug/l	
1330-20-7	Xylenes (total)	127	2.0	0.93	ug/l	
95-47-6	o-Xylene	57.3	1.0	0.36	ug/l	
	m,p-Xylene	69.8	1.0	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		58-125%
98-08-8	aaa-Trifluorotoluene	126%		73-139%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	HAMMOND 41A MW-5		
Lab Sample ID:	T36560-2	Date Sampled:	08/25/09
Matrix:	AQ - Ground Water	Date Received:	08/28/09
Method:	SW846 8021B	Percent Solids:	n/a
Project:	San Juan Basin Pit Groundwater Remediation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK032426.D	1	09/08/09	FI	n/a	n/a	GKK1551
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.7	1.0	0.36	ug/l	
108-88-3	Toluene	23.4	1.0	0.28	ug/l	
100-41-4	Ethylbenzene	29.7	1.0	0.25	ug/l	
1330-20-7	Xylenes (total)	133	2.0	0.93	ug/l	
95-47-6	o-Xylene	60.9	1.0	0.36	ug/l	
	m,p-Xylene	72.4	1.0	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	112%		58-125%
460-00-4	4-Bromofluorobenzene	115%		58-125%
98-08-8	aaa-Trifluorotoluene	118%		73-139%
98-08-8	aaa-Trifluorotoluene	121%		73-139%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	250809TB01		
Lab Sample ID:	T36560-3	Date Sampled:	08/25/09
Matrix:	AQ - Trip Blank Water	Date Received:	08/28/09
Method:	SW846 8021B	Percent Solids:	n/a
Project:	San Juan Basin Pit Groundwater Remediation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK032402.D	1	09/03/09	FI	n/a	n/a	GKK1550
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.36	ug/l	
108-88-3	Toluene	ND	1.0	0.28	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.25	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.93	ug/l	
95-47-6	o-Xylene	ND	1.0	0.36	ug/l	
	m,p-Xylene	ND	1.0	0.57	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	100%		58-125%
98-08-8	aaa-Trifluorotoluene	119%		73-139%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

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FED-EX Tracking # 8706 6705 9500 | Bottle Order Control # | Accutest Quote # | Accutest Job # T36560

Client / Reporting Information

Company Name: MWH
Project Contact: Jed Smith | E-Mail: jed.smith@mwhglobal.com
Address: 1801 California Street, Suite 2900
City: Denver | State: CO | Zip: 80202
Phone No.: 303-291-2276 | Fax No.:
Sampler's Name: Troy Urban

Project Information

Project Name / No.: EPTPC San Juan Basin Pit GW Remediation 2009-2010
Bill to: El Paso Corp | Invoice Attn.: Norma Ramos
Address: 1001 Louisiana Street, Rm S1904B
City: Hou | State: TX | Zip: 77002
Phone No.: | Fax No.:
Client Purchase Order #: west-ALAB-Ground Rem 007

Requested Analyses

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles: HCl	HNO3	H2SO4	ENCORE	NaHSO4	MEOH	NONE	BTEX (8021B) include m, p, & o-xylene	LAB USE ONLY
	Hammond 41A TMW-1	082509	1215	GW	3	X							X	
	Hammond 41A MW-5	082509	1200	GW	3	X							X	
	250809TB01	082509	0700	GW	2	X							X	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Wastewater
SO - Soil
SL - Sludge
OI - Oil
LIQ - Liquid
SOL - Other Solid

Turnaround Time (Business days)

- [X] 10 Day STANDARD
- [ ] 7 Day
- [ ] 4 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Approved By/ Date:

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [X] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] TRRP-13
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

If samples are received unpreserved, please notify MWH regarding holding time!!!

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Troy Urban 9/27/09	1330	1	2 FedEx	8/28/09 0940	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp 2.0
			5			

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T36560: Chain of Custody
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SAMPLE INSPECTION FORM

Accutest Job Number: T36560 Client: MW H Date/Time Received: 8-28-9 945

# of Coolers Received: 1 Thermometer #: IR-1 Temperature Adjustment Factor: +.4

Cooler Temps: #1: 2.0°C #2: _____ #3: _____ #4: _____ #5: _____ #6: _____ #7: _____ #8: _____

Method of Delivery: (FEDEX) UPS Accutest Courier Greyhound Delivery Other

Airbill Numbers: _____

COOLER INFORMATION
- [ ] Custody seal missing or not intact
- [ ] Temperature criteria not met
- [ ] Wet ice received in cooler

CHAIN OF CUSTODY
- [ ] Chain of Custody not received
- [ ] Sample D/T unclear or missing
- [ ] Analyses unclear or missing
- [ ] COC not properly executed

SAMPLE INFORMATION
- [ ] Sample containers received broken
- [ ] VOC vials have headspace
- [ ] Sample labels missing or illegible
- [ ] ID on COC does not match label(s)
- [ ] D/T on COC does not match label(s)
- [ ] Sample/Bottles rcvd but no analysis on COC
- [ ] Sample listed on COC, but not received
- [ ] Bottles missing for requested analysis
- [ ] Insufficient volume for analysis
- [ ] Sample received improperly preserved

TRIP BLANK INFORMATION
- [ ] Trip Blank on COC but not received
- [ ] Trip Blank received but not on COC
- [ ] Trip Blank not intact
- [ ] Received Water Trip Blank
- [ ] Received Soil TB

Number of Encores? _____
Number of 5035 kits? _____
Number of lab-filtered metals? _____

Summary of Discrepancies:

TECHNICIAN SIGNATURE/DATE: [signature] 8.28.9

INFORMATION AND SAMPLE LABELING VERIFIED BY: _____

CORRECTIVE ACTIONS

Client Representative Notified: _____ **Date:** _____

By Accutest Representative: _____ **Via:** Phone Email

Client Instructions:

I:\mwalker\forms\samplemanagement

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SAMPLE RECEIPT LOG

JOB #: T36560 DATE/TIME RECEIVED: 8-28-9 910

CLIENT: MWH INITIALS: 9

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH
1	1	Harmon 41A TMW-1	8-25-9 1215	W	40ml	1-3	VR	1 ② 3 4 5 6 7 8	<2 >12
↓	2	" " MW-5	"	↓	↓	1-3	↓	1 ② 3 4 5 6 7 8	<2 >12
↓	3	Trip Blank	—	—	↓	1-2	↓	1 ② 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12
								1 2 3 4 5 6 7 8	<2 >12

JC 8-28-9

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

Rev 8/13/01 ewp

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T36560: Chain of Custody
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