3R - 192

CLOSURE REQUEST

10/29/2009

3R 192



Via FedEx

October 29, 2009

Mr. Glenn von Gonten Senior Hydrologist New Mexico Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505

RE: Closure Request for Horton #1E Site NMOCD Case No. 3RP-192

Dear Mr. von Gonten:

El Paso Tennessee Pipeline Company (EPTPC), formerly El Paso Field Services (EPFS), hereby requests regulatory closure of the Horton #1E site (NMOCD Case No. 3R-192). This correspondence documents the analytical results from site monitoring activities that have been ongoing for several years in accordance with the Remediation Plan approved by the New Mexico Oil Conservation Division (OCD) on November 30, 1995. EPTPC is requesting closure of the Horton #1E site based on the data obtained and documented herein.

Summary of Project History

The Horton #1E pit site was assessed in 1994, and 50 cubic yards of impacted soil were excavated from the former pit in September 1994. The first monitoring well (MW-1) was installed in August 1995, in the location of the former pit. The groundwater in MW-1 exhibited benzene at a concentration of 308 μ g/L, which exceeded the NMWQCC groundwater benzene standard of 10 μ g/L.

In 1999, additional site characterization work was conducted in order to more fully delineate the hydrocarbon plume in groundwater. Two additional monitoring wells (MW-2 and MW-3) were installed south and east-southeast of MW-1. The hydraulic gradient was found to be toward the southeast; and subsequent sampling of MW-2 and MW-3 throughout the project life has indicated that these wells are unimpacted by BTEX constituents. The focus of the project has thus been to regularly monitor the natural attenuation of benzene concentrations in MW-1.

Monitoring Data

Figures 1 through 4 depict the site layout and the most recent four consecutive quarters of groundwater analytical results (November 2008). Figure 5 is a trend graph of the historical BTEX concentration trends in monitoring well MW-1. Table 1, attached, summarizes the historic monitoring data for the site. As of September 2009, the

El Paso Tennessee Pipeline Company 1001 Louisiana Street Houston, Texas 77002 RECEIVED (



groundwater quality at the site has now met the applicable New Mexico Water Quality Control Commission standards for 4 consecutive quarters, fulfilling the closure criteria specified in Section 5 of the approved El Paso Remediation Plan. Attachment 1 contains the laboratory analytical reports for these 4 quarterly sampling events.

If you have any comments or questions concerning this correspondence, please contact me at (713) 420-5150.

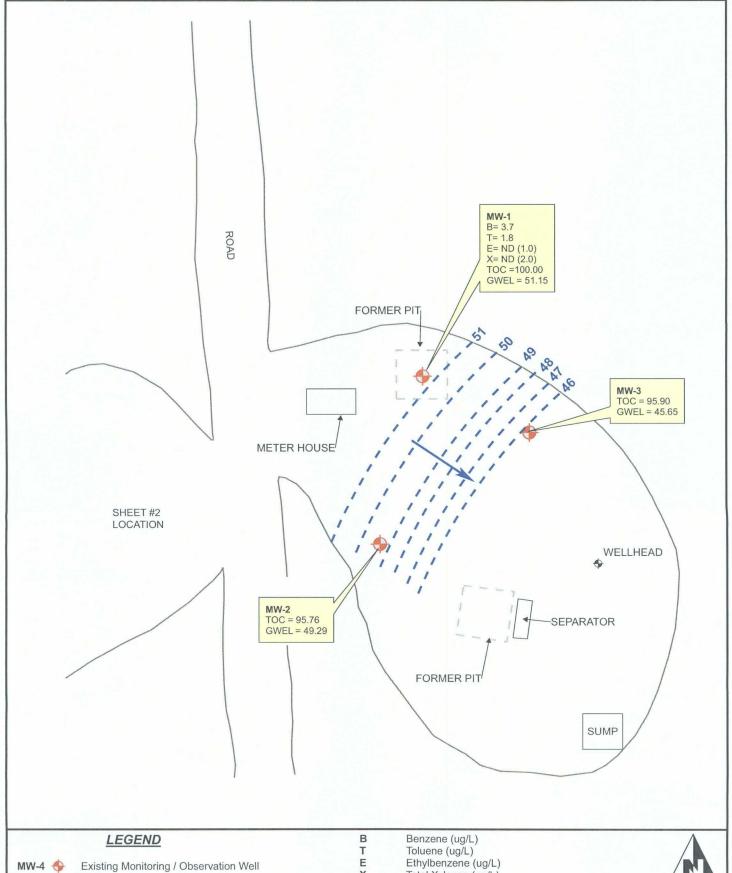
Sincerely,

Doug Stavinoha

Project Manager for El Paso Tennessee Pipeline Co.

cc: Jed Smith – MWH, w / o enclosures

Pit Groundwater Remediation – General File, w / enclosures



Groundwater Flow Direction

1275

Potentiometric Surface Contour (Inferred Where Dashed)

EX Total Xylenes (ug/L)

TOC Top of Casing (ft. *) **GWEL** Groundwater Elevation (ft. *)



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

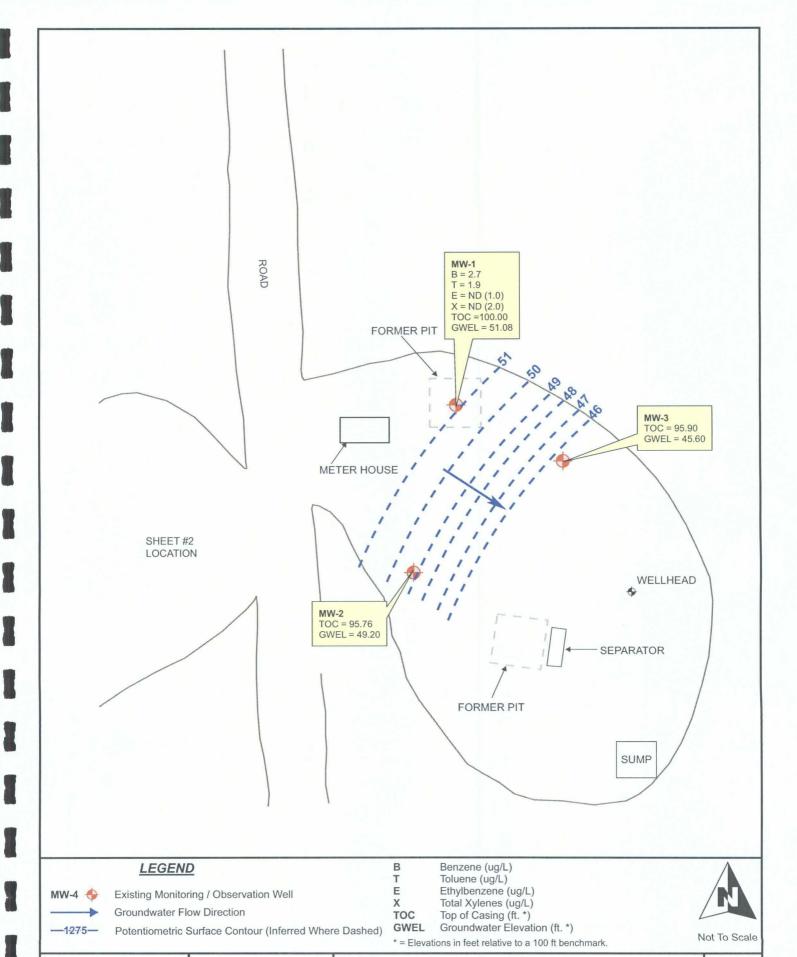




PROJECT: HORTON #1E

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - December 2, 2008 FIGURE:

1







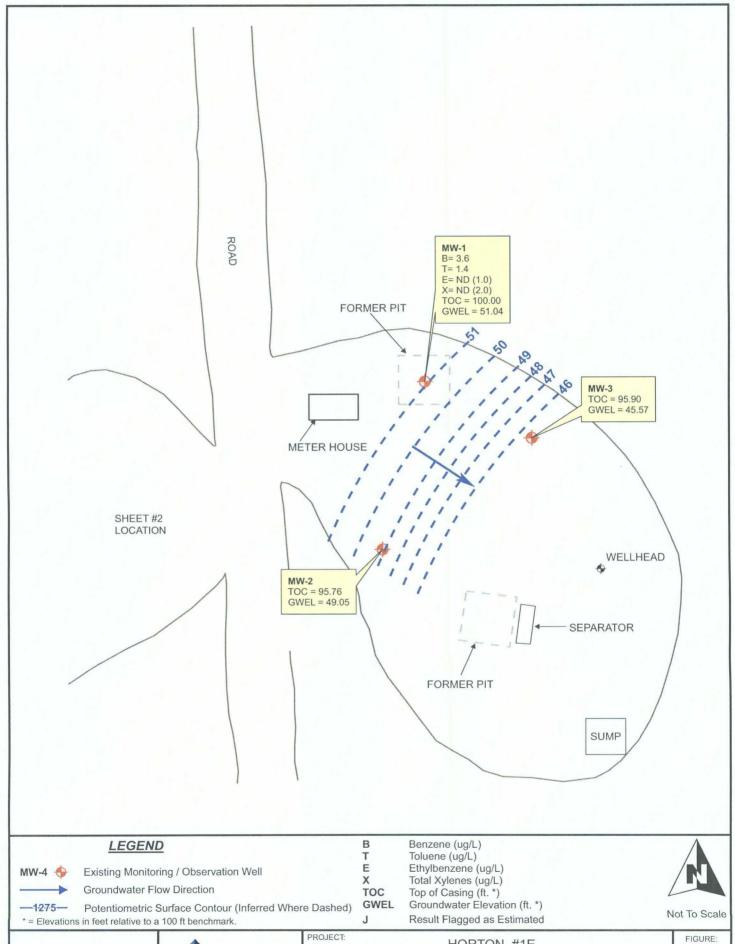
PROJECT:

HORTON #1E

FIGURE:

2

Groundwater Potentiometric Surface Map, and BTEX Concentrations - March 3, 2009





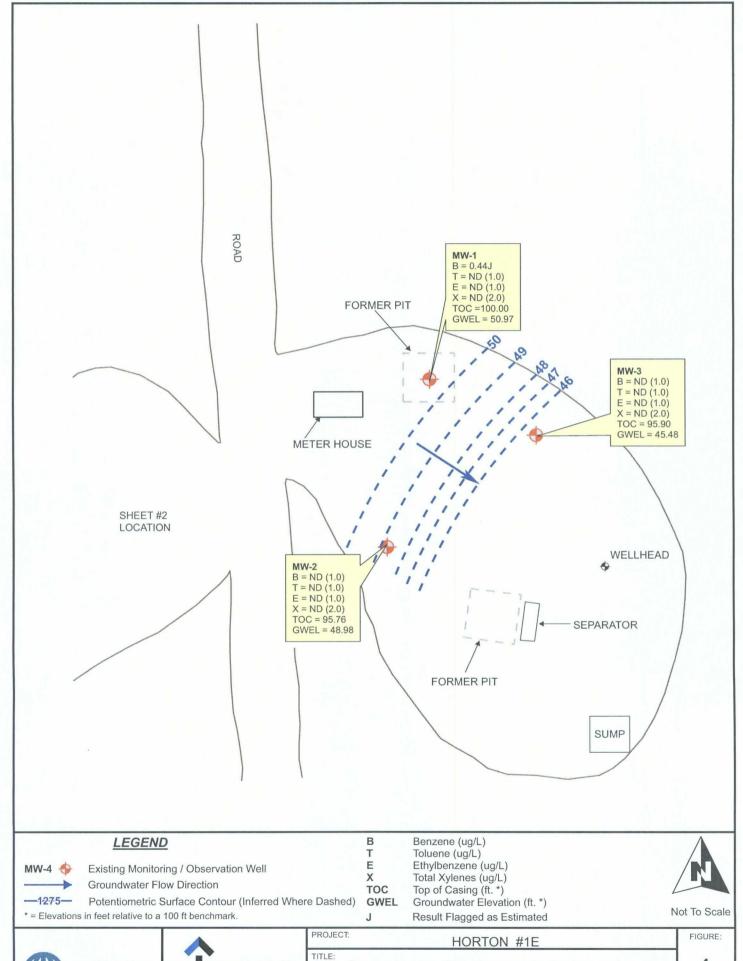


TITLE:

HORTON #1E

Groundwater Potentiometric Surface Map, and BTEX Concentrations - June 2, 2009

3



(#) мwн



Groundwater Potentiometric Surface Map, and BTEX Concentrations - September 16, 2009

4

FIGURE 5
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES
HORTON #1E (METER #93388)

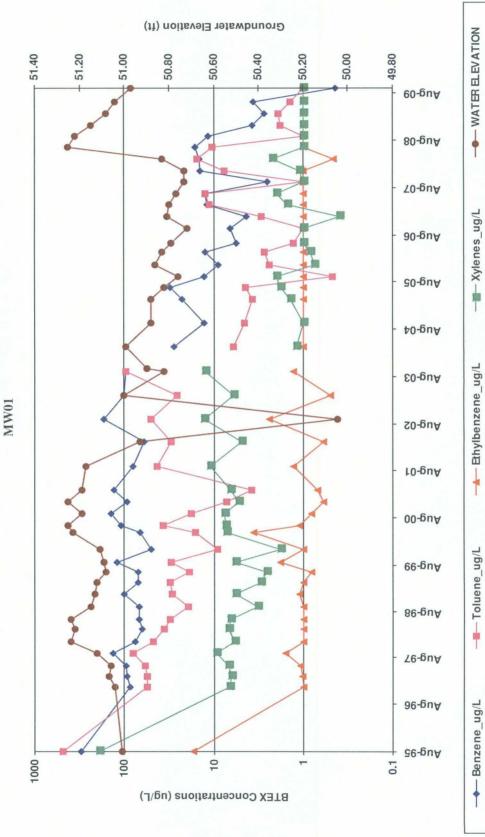


TABLE 1
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES HORTON #1E (METER #93388)

Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	≥ 8/7/1995	308	483	16.9	190	48.99
	12/17/1996	86.8	55.5	1	6.66	48.96
域中国的国际基础设施。 对对中国的政策是是	3/10/1997	18181933 1918193	55.3	1.02	6.34	48.93
	6/2/1997	96.1	58.8	1.07	6.82	48.94
	9/8/1997	132	图 80.7.4	1.59	9.46	48.88
Provide to the a trade to the common to the contract of the co	12/10/1997	74.9	47.1	athetisticano and a contratano and a con	5.94	48.76
	3/23/1998	63.6	35.9		6.93	4878
tap 2 地道では近年度ながらずからあった。 (近くなっかがっなではで)	6/4/1998	68.1	30.6	1	6.6	48.76
	÷ 9/14/1998	67.7	19.4		3.26	48.85
nukus wakio o mamping na Jarah Manik at s	12/17/1998	100	29	1.1	5.8	48.87
Property of the second	3/23/1999	70.1	30.6	Commission 1	3	48.88 A
 N. T. Sella, L. Joseph J. C. L. Control and subschild below to the foods. 	6/11/1999	71	19	0.8	2.6	48.92
	9/2/1999	120	30	1.8	车。电影5.8 海山野門	48.91
Bullet with the first in order with a more ending.	12/9/1999	50	9.1	1	1.8	48.89
property and the second	4/12/2000	67。	16	3.6	7.2	48.77
UP = 4 July Land Hall State (Section 2)	6/9/2000	110 Restrict North State State Color	37 Suoteen senember 1980 1980	1.1	7.4	48.75
	9/8/2000	140	18	0.8	7.6	48.81
man la	12/11/2000	93	7.2	0.6	5.3	48.75
	3/13/2001	130	3.8		6.6	48.81
y - or Arand papersales day - other	9/7/2001	80	43	1.3	11	48.83
	3/20/2002	60 3	30.重量。	2.0.6	4.9	49.07
	9/10/2002	167	49.9	2.4	12.7	49.96
	3/14/2003	100	25.5	0.5	6.1	49.00
ing the second state of the second	9/16/2003	95.5	95.8	1.3	12.5	49.18
	3/23/2004	27.8	6.1			49.01
	9/22/2004	12.8	4.5 ************************************		l sassas sees sees of the Companion	49.12
	3/23/2005	22.8				49.12
	6/23/2005 9/20/2005	30.6	4.4	l Nevalence	1.8 ************************************	49.18
			2.4	2000年1月 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	49.24
	12/14/2005	8.8 12.5	2.4		0.74 (連続表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表表	49.14
	3/27/2006 - 6/7/2006		1.2	1	0.82	
	6///2006 	5.6	1.3	1 記録 表現を開発しませる からなっては	l Hermanikan takibi	49.21
	。革命時期期的中國部部。 法军马	6.5				49.28
	12/27/2006	4.3	2.9		0.39	49.19
144 - 144	31.481.4UU /		生まる理解を表現しても、 中心。 現代を表現している。 現代を表現している。			如

Note: Non Detects are represented by a value of 1.

TABLE 1
SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER SAMPLES HORTON #1E (METER #93388)

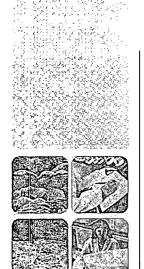
Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft BTOC)
MW01	6/18/2007: E	12.6	12.5			49.23
	9/17/2007	2.5	1	1	1	49.27
TILBESTING COST	12/17/2007		7.6	n, CK, grafist Mar Ingels DE THE RECEIVE OF THE NAME THE CONTRACT	1.1	49.27
Annual collection in averaging in	3/11/2008	14.7	15.5	0.46	2.2	49.17
The second secon	6/17/2008	16.2	10.3		0.99	48.75
	9/10/2008	11.6	1	1	1	48.78
	. 12/2/2008	3.7	18.			48.85
TO THE PROPERTY OF STATE OF ST	3/3/2009	2.7	1.9	1	1	48.92
	6/2/2009	3.6				48.96
	9/16/2009	0.44	1	1	1	49.03
MW02	10/20/1999				1	
The second designation of the second	10/9/2000	1	0.7	1	1.1	46.41
Programme and a second	3/13/2001					46.47
	3/20/2002	1	1	1	1	46.75
	3/31/2007	5) 1551 M THE STATE OF THE STAT				46.89
8. 2000 - Engly 300 12.500	9/16/2009	1	1	1	1	46.78
MW03	10/20/1999				0.8	
AND THE SECOND CONTRACTOR OF A SECOND CONTRACTOR	10/10/2000	1	1	""。在《北海湖中的山村园园》中的山村。在1900年 1	**************************************	50.12
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Angelen de	3/31/2007.	1 45			superside de la color de la co	50.52
proceedings of the second of the second of	9/16/2009	1	1	al ed er el likelet kommen eg er finder en en staten britte. I	Companies and the second state of the second	50.42

ATTACHMENT 1 Analytical Laboratory Reports





12/14/08



Technical Report for

Montgomery Watson

San Juan Basin GW Sites Project

Accutest Job Number: T24833

Sampling Date: 12/02/08

Report to:

MWH Americas 1801 California St. Suite 2900

Denver, CO 80202

daniel.a.wade@mwhglobal.com; alyssa.beard@mwhglobal.com;

craig.moore@mwhglobal.com

ATTN: Daniel Wade

Total number of pages in report: 15





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 Canevaro Laboratory Director

Paul K Canevaro

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)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com

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-3

Sample Summary

Montgomery Watson

Job No:

T24833

San Juan Basin GW Sites Project

Sample Number	Collected Date	Received	Matr Code		Client Sample ID	
T24833-1	12/02/08	07:00 TU	12/03/08	AQ	Trip Blank Water	120208TB01
T24833-2	12/02/08	09:33 TU	12/03/08	AQ	Ground Water	HORTON #1E MW-1





SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Montgomery Watson

Job No

T24833

Site:

San Juan Basin GW Sites Project

Report Date

12/10/2008 5:20:49 PM

1 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 12/02/2008 and were received at Accutest on 12/03/2008 properly preserved, at 5.2 Deg. C and intact. These Samples received an Accutest job number of T24833. 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

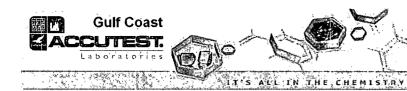
Batch ID: GKK1389

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T24833-2MS, T24833-2MSD 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	Harrist College	
Report of Analysis		



Report of Analysis

By

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Page 1 of 1

Client Sample ID: 120208TB01

Lab Sample ID:

T24833-1

Matrix:

AQ - Trip Blank Water

DF

Date Sampled: 12/02/08

Date Received: 12/03/08

Method:

SW846 8021B

Percent Solids: n/a

Project:

San Juan Basin GW Sites Project

Prep Date n/a

Prep Batch n/a

Analytical Batch GKK1389

Run #1 Run #2

Purge Volume

KK028281.D

File ID

5.0 ml

Run #1

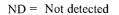
Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL Uni	ts Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	ND 0.00092 ND ND ND	0.0010 0.0020 0.0010	0.00021 mg/ 0.00023 mg/ 0.00035 mg/ 0.00055 mg/ 0.00066 mg/	T J T T T T T T T T T T T T T T T T T T
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	90% 104%		58-125% 73-139%	

Analyzed

12/08/08



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

Page 1 of 1

Client Sample ID: HORTON #1E MW-1

Lab Sample ID:

T24833-2

Matrix:

AQ - Ground Water

SW846 8021B

San Juan Basin GW Sites Project

Date Sampled: 12/02/08 Date Received: 12/03/08

Percent Solids: n/a

File ID DF Analyzed By **Prep Date** Prep Batch **Analytical Batch** 12/08/08 FI GKK1389 Run #1 KK028282.D 1 n/a n/a

Run #2

Method:

Project:

Purge Volume

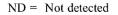
Run #1

Run #2

Purgeable Aromatics

5.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenzene	0.0037 0.0018 ND	0.0010 0.0010	0.00021 0.00023 0.00035	mg/l mg/l	
1330-20-7 95-47-6	Xylenes (total) o-Xylene m,p-Xylene	ND ND ND	0.0020 0.0010 0.0010	0.00055 0.00055 0.00066	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	91% 105%		58-12 73-13		



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



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Laboratories			w	ww.a	ccut	est.co	m			Accut	est Quot	e #			Accur	est Job	# T248	133		
Client / Reporting Information			Project Ini	formatio	อก	-								Re	uested A	******		and a		Matrix Codes
							***********	*******								T		Т		DW - Dranking Water
Company Name MWH Americas, Inc Address 1801 California St, Suite 2900 City State Denver Co 80202	San Ju	in K	ver	Bas.	in	G,	1040	nd w	4ter	4			I		1	1		- 1		GW - Ground Water
1801 Callfornia St. Suite 2900	Street											1	ĺ			1		- 1		WW - Water
City State Zip	City		Stat	te .		_				10	1				1	1				SW - Surface Water
Denver CO 80202										ا ح			ı		1	1				SO - Soil
Project Contact E-mail Jed Smith	Project #									80			- 1		i	1	1 1	- 1		SL - Sludge
Physic #	Fax #									$+\infty$			- 1		1	1	1 1		- {	OI - Oil
303-291-2276										1.			- 1						- 1	LIQ - Other Liquid
Sampler's Name Troy Urban	Client Purchase Ord	er#	0 /	,		0.				17.			- 1							A/R - Air
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Sample #		Sampled M.	# of bottles	\Box	\neg r	2 100 U	$\overline{}$	7	- Lu	8			- 1						⊢	WP - Wipe
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T24833: Chain of Custody Page 1 of 3



SAMPLE INSPECTION FORM

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奉報

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Accutest Job Number: 124873	Client: MWH Americas	Project: Son Juan River Bose's browdanter
Date/Time Received: "(1.5.05 0500	# of Coolers Received:/	Thermometer #
Cooler Temps: #1: <u>5.2</u> #2:	#3:#4:#5:	#6: #7: #8:
Method of Delivery: FEDEX UPS	Accutest Courier Greyhound	Delivery Other
Airbill Numbers:	8571-6154-2199	
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 Summary of Discrepancies:	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 revd 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 triact Received Water Trip Blank Received Soil TB Number of Encores? Number of 5035 kits? Number of lab-liltered metals?
TECHNICIAN SIGNATURE/DATE:	L WZEB	Date: Via: Phone Email
,		

T24833: Chain of Custody Page 2 of 3



SAMPLE RECEIPT LOG

JOB #:		T2 4833			DATE/TIME	RECEIVED	12.3.	06 040	<u>a</u>				
CLIENT:		MUH Americas Inc		INITIALS: 17									
COOLER#	SAMPLE ID	FIELD ID	DATE		MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	F	PH		
,	,	mipskuk	_		ÞΙ	Yone	1-2	Vr_	1 (2) 3 4 5 6 7 8	<2	>12		
L	Z	Norther #12 pint-(12.02.08	533	60	4	,-3	_₹	1 (2) 3 4	<2	>12		
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									1 2 3 4 5 6 7 8	ستعسا	>12		
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		12.3.08							1 2 3 4 5 6 7 8	<5	>12		
									1 2 3 4	<2	>12		
							1		1 2 3 4 5 6 7 8	<2	>12		
						-			1 2 3 4	<2	>12		
									1 2 3 4 5 6 7 8	<2	>12		
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			 			 -	<u> </u>		5 6 4 8	<2	>12		
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		2; HCL 3; HNO3 4; H2SO4 5; NA	01. 6.61. 7.11.	1					5 6 7 8				

T24833: Chain of Custody Page 3 of 3







GC Volatiles



QC Data Summaries

Includes the following where applicable:

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



Page 1 of 1

Job Number:

T24833

Account: Project:

MWHCODE Montgomery Watson San Juan Basin GW Sites Project

Sample File ID DF Analyzed By **Prep Date** Prep Batch **Analytical Batch**

GKK1389-MB KK028278.D1 12/08/08 FΙ n/a

GKK1389 n/a

The QC reported here applies to the following samples:

Method: SW846 8021B

T24833-1, T24833-2

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

CAS No. **Surrogate Recoveries** Limits 93% 58-125% 73-139% 460-00-4 4-Bromofluorobenzene 98-08-8 aaa-Trifluorotoluene



Page 1 of 1

Job Number:

T24833

Account: Project:

MWHCODE Montgomery Watson San Juan Basin GW Sites Project

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1389-BS	KK028277	.D1	12/08/08	FI	n/a	n/a	GKK1389

Method: SW846 8021B

The QC reported here applies to the following samples:

T24833-1, T24833-2

CAS No.	Compound	Spi ug/		BSP %	Limits
71-43-2	Benzene	20	20.2	101	86-121
100-41-4	Ethylbenzene	20	19.5	.98	81-116
108-88-3	Toluene	20	19.5	98	87-117
1330-20-7	Xylenes (total)	60	57.8	96	85-115
95-47-6	o-Xylene	20	19.2	96	87-116
	m,p-Xylene	40	38.6	97	84-116

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	90%	58-125%
98-08-8	aaa-Trifluorotoluene	109%	



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Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: T24833

Account: Project:

MWHCODE Montgomery Watson San Juan Basin GW Sites Project

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T24833-2MS	KK028283	.D1	12/08/08	FI	n/a	n/a	GKK1389
Γ24833-2MSD	KK028284	.D1	12/08/08	FI	n/a	n/a	GKK1389
T24833-2	KK028282	.D1	12/08/08	FI	n/a	n/a	GKK1389

The QC reported here applies to the following samples:

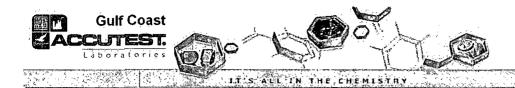
Method: SW846 8021B

T24833-1, T24833-2

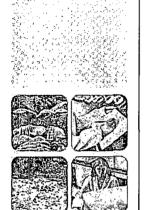
CAS No.	Compound	T24833-2 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD % RPI	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	3.7 ND 1.8 ND ND ND	20 20 20 60 20 40	23.2 19.4 20.6 57.3 18.8 38.4	98 97 94 96 94 96	24.1 19.8 21.3 58.5 19.2 39.3	102 4 99 2 98 3 98 2 96 2	86-121/19 81-116/14 87-117/16 85-115/12 87-116/16 84-116/13
CAS No.	Surrogate Recoveries	MS	MSD	Т2	4833-2	Limits		
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	88% - 106%	92% 109%	919	% 5%	58-1259 73-1399	=	



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03/09/09



Technical Report for

Montgomery Watson

San Juan Basin Pit Groundwater Remediation 2008-2009

Accutest Job Number: T25892

Sampling Date: 03/03/09

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: 15





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 Carrevaro 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)

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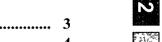
Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com

Sections:











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5.1: Method Blank Summary	13
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5.3: Matrix Spike/Matrix Spike Duplicate Summary	15



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Sample Summary

Montgomery Watson

Job No:

T25892

San Juan Basin Pit Groundwater Remediation 2008-2009

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
T25892-1	03/03/09	09:39 TU	03/04/09	AQ	Ground Water	HORTON 1E MW 1
T25892-2	03/03/09	07:00 TU	03/04/09	AQ	Trip Blank Water	030309TB01







SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Montgomery Watson Job No

T25892

Site:

San Juan Basin Pit Groundwater Remediation 2008-2009

Report Date 3/9/2009 3:10:05 PM

1 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 03/03/2009 and were received at Accutest on 03/04/2009 properly preserved, at 4.4 Deg. C and intact. These Samples received an Accutest job number of T25892. A listing of the Laboratory Sample 1D, Client Sample 1D 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: GKK1444

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T25846-2MS, T25846-2MSD 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



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Report of Analysis

Report of Analysis

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Page 1 of 1

Client Sample ID: HORTON 1E MW-1

DF

1

Lab Sample ID:

T25892-1

SW846 8021B

Date Sampled: Date Received:

03/03/09

AQ - Ground Water

Prep Date

n/a

03/04/09

Matrix: Method:

San Juan Basin Pit Groundwater Remediation 2008-2009

Percent Solids: n/a

Project:

Analyzed

03/07/09

Prep Batch n/a

Analytical Batch **GKK1444**

Run #1 Run #2

Purge Volume

KK029828.D

File ID

5.0 ml

Run #1

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	2.7 1.9 ND ND ND ND	1.0 1.0 1.0 2.0 1.0	0.21 0.23 0.35 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	96% 84%			25% 39%	

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



Client Sample ID: 030309TB01

Lab Sample ID:

T25892-2

AQ - Trip Blank Water

DF

1

Date Sampled:

03/03/09

Matrix: Method:

SW846 8021B

Date Received: Percent Solids: n/a

Units

ug/l

ug/l

ug/l

ug/l

ug/l

ug/l

03/04/09

Project:

San Juan Basin Pit Groundwater Remediation 2008-2009

Analytical Batch

Run #1

KK029823.D

Analyzed By 03/06/09 FI

Prep Date n/a

Prep Batch n/a

Q

GKK1444

Run #2

Purge Volume

Run #1 Run #2

5.0 ml

File ID

Purgeable Aromatics

CAS No.	Compound	

71-43-2	Benzene
108-88-3	Toluene
100-41-4	Ethylbenzene
1330-20-7	Xylenes (total)
95-47-6	o-Xvlene

CAS No.	Surrogate Recoveries

m,p-Xylene

4-Bromofluorobenzene 460-00-4 aaa-Trifluorotoluene 98-08-8

ND 1.5 1.0 ND 2.0 2.0 ND

Run#1

ND 1.0 ND 1.0

Result

1.0 0.55 ND 3.4 0.66

RL

Run#2 Limits

> 58-125% 73-139%

MDL

0.21

0.23

0.35

0.55

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. F	orms		

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



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T25892: Chain of Custody Page 1 of 3



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Accutest Job Number: TyB97	Client: MWH	_ Date/Time Received:
# of Coolers Received: The	rmometer #:Ten	mperature Adjustment Factor:O. Y
Cooler Temps: #1: <u> </u>	#3:#4:#5:	#6: #8:
Method of Delivery: FEDEX UPS	Accutest Courier Greyhound	Delivery Other
Airbill Numbers: 8662 - 23	09-4720	***
COOLER INFORMATION	SAMPLE INFORMATION	TRIP BLANK INFORMATION
Custody seal missing or not intact	Sample containers received broken was a	Trip Blank on COC but not received
Temperature criteria not met	VOC vials have headspace	Trip Blank received but not on COC
Wet ice received in cooler	Sample labels missing or illegible	Trip Blank not intact
	ID on COC does not match label(s)	Received Water Trip Blank
CHAIN OF CUSTODY	D/T on COC does not match label(s)	Received Soil TB
Chain of Custody not received	Sample/Bottles revd but no analysis on COC	
Sample D/T unclear or missing	Sample listed on COC, but not received	
Analyses unclear or missing	Bottles missing for requested analysis	Number of Encores?

Insufficient volume for analysis Sample received improperly preserved Number of 5035 kits?

Number of lab-filtered metals?

SAMPLE INSPECTION FORM

T75897

COC not properly executed

Summary of Discrepancies:

INFORMATION AND SAMPLE LABELING VERIFIED BY: **CORRECTIVE ACTIONS** Client Representative Notified: Date: By Accutest Representative: Via: Phone Email Client Instructions:

T25892: Chain of Custody

Page 2 of 3



			•	SAMPLE RE	CEIPT	LUG					
JOB#:		T2589	2:		DATE/TIME	RECEIVED:	7	3-4-9	900		
CLIENT:	·/	nwit		·		INITIALS:	<u></u> -G	Itc	····	<u> </u>	
COOLER#	SAMPLE ID	FIELD IO		DATE	MATRIX	VOL	BOTTLE#	LOCATION	PRESERV	P	 Н
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PRESERVA	ATIVES: 1: Non	e 2: HCL 3: HNO3 4:	H2SO4 5: NAO	H 6: DI 7: MeOH 8: C	Other						

T25892: Chain of Custody Page 3 of 3





GC-Volatiles



QC Data Summaries

Includes the following where applicable:

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



Job Number:

T25892

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
GKK1444-MB	KK029812.	.D1	03/06/09	FI	n/a	n/a	GKK1444

The QC reported here applies to the following samples:

Method: SW846 8021B

T25892-1, T25892-2

CAS No.	Compound	Result	RL	MDL	Units Q	
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND	1.0 1.0 1.0 2.0 1.0	0.21 0.35 0.23 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Limits				
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	96% 58-125% 73-139%				



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
GKK1444-BS	KK029808.I	D1	03/06/09	FI	n/a	n/a	GKK1444

The QC reported here applies to the following samples:

Method: SW846 8021B

T25892-1, T25892-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	20 20 20 60 20 40	19.2 19.5 19.4 58.6 19.6 39.0	96 98 97 98 98 98	86-121 81-116 87-117 85-115 87-116 84-116
CAS No. 460-00-4 98-08-8	Surrogate Recoveries 4-Bromofluorobenzene aaa-Trifluorotoluene	BSP 98% 85%	Limits 58-125% 73-139%		



Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number:

T25892

Account:

MWHCODE Montgomery Watson

Project:

San Juan Basin Pit Groundwater Remediation 2008-2009

T25846-2MSD KK029820.D1 03/06/09 FI n/a n/a GKK1444 T25846-2 KK029816.D1 03/06/09 FI n/a n/a GKK1444
--

The QC reported here applies to the following samples:

Method: SW846 8021B

T25892-1, T25892-2

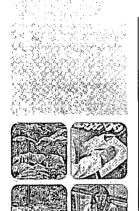
CAS No.	Compound	T25846- ug/l	Q Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	0.72 ND ND ND ND ND ND	J	20 20 20 60 20 40	21.2 20.9 20.7 61.7 20.6 41.1	102 105 104 103 103 103	20.5 20.0 20.0 59.4 19.8 39.5	99 100 100 99 99	4 3	86-121/19 81-116/14 87-117/16 85-115/12 87-116/16 84-116/13
CAS No.	Surrogate Recoveries	MS		MSD	T25	5846-2	Limits			
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	100% 85%		99% 84%	989 849	N-CCOMPAGE 1826715226 E18-	58-1259 73-1399			



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06/11/09



Technical Report for

Montgomery Watson

San Juan Basin Pit Groundwater Remediation 2008-2009

Horton

Accutest Job Number: T30414

Sampling Date: 06/02/09

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; ala@lodestarservices.com

ATTN: Jed Smith

Total number of pages in report: 15





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 Canevaro Laboratory Director

Paul K Canevaro

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)

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4.1: Chain of Custody	9
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5.1: Method Blank Summary	13
5.2: Blank Spike Summary	14
5.3: Matrix Spike/Matrix Spike Duplicate Summary	15













Sample Summary

Montgomery Watson

Job No:

T30414

San Juan Basin Pit Groundwater Remediation 2008-2009 Project No: Horton

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
T30414.1	06/02/09	06:55 TU	06/04/09	AQ	Trip Blank Water	020609TB02
T30414-2	06/02/09	08:52 TU	06/04/09	AQ	Ground Water	HORTON 1E MW-1





SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Montgomery Watson

Job No

T30414

Site:

San Juan Basin Pit Groundwater Remediation 2008-2009

Report Date

6/8/2009 3:24:25 PM

1 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 06/02/2009 and were received at Accutest on 06/04/2009 properly preserved, at 4 Deg. C and intact. These Samples received an Accutest job number of T30414. 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: GKK1498

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T30414-2MS, T30414-2MSD 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







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Sample Results		A CONTRACTOR	Section 2 Section 2005 CE
Report of Analysi	is		



By

FI

Client Sample ID: 020609TB02 Lab Sample ID:

T30414-1 AQ - Trip Blank Water

DF

Date Sampled: 06/02/09 Date Received:

Prep Date

n/a

06/04/09

Matrix: Method:

SW846 8021B

n/a

Percent Solids: n/a

Project:

San Juan Basin Pit Groundwater Remediation 2008-2009

Analyzed

06/05/09

Analytical Batch Prep Batch **GKK1498**

Run #1

Run #2

Purge Volume

Run #1 Run #2

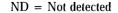
5.0 ml

KK031128.D

File ID

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND	1.0	0.21 0.23 0.35 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	85% 88%			.25% 39%	



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





Report of Analysis

By

FI

Page 1 of 1

Client Sample ID: HORTON 1E MW-1

Lab Sample ID:

T30414-2

AQ - Ground Water

DF

1

Date Sampled:

06/02/09

Matrix: Method:

SW846 8021B

Date Received:

Prep Date

n/a

06/04/09

Project:

San Juan Basin Pit Groundwater Remediation 2008-2009

Analyzed

06/05/09

Percent Solids: n/a

Prep Batch n/a

Analytical Batch **GKK1498**

Run #1 Run #2

Purge Volume

KK031118.D

File ID

Run #1

5.0 ml

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	3.6 1.4 ND ND ND ND ND	1.0 1.0 1.0 2.0 1.0	0.21 0.23 0.35 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	84% 90%		58-1 73-1		



MDL - Method Detection Limit

RL = Reporting Limit

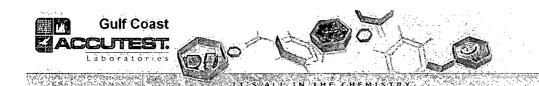
E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank







Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



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T30414: Chain of Custody Page 1 of 3

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 Analyses unclear or missing COC not properly executed COC to the properly executed COC to	Accutest Job Number: 30714	Client: MwH		_ Date/Time Rec	eived: 6-7	-9 9CF	
Accutest Courier Greyhound Delivery Other 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 Analyses unclear or missing Analyses unclear or missing COC not properly executed Accutest Courier Greyhound SAMPLE INFORMATION TRIP BLANK INFORMATION Trip Blank on COC but not received Trip Blank received but not on COC Trip Blank not intact ID on COC does not match label(s) Received Water Trip Blank Received Soil TB Number of Encores? Number of 5035 kits?	# of Coolers Received: Ther	mometer #: 110	Ten	nperature Adjusti	nent Factor:	-0. z	
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	Custody seal missing or not intact Temperature criteria not met Wet ice received in cooler CHAIN OF CUSTODX Chain of Custody not received Sample D/T unclear or missing Analyses unclear or missing	Sample containers receive VOC vials have headspace Sample labels missing or ID on COC does not mate. D/T on COC does not mate. Sample/Bottles revd but it Sample listed on COC, but Bottles missing for reques	ed broken e llegible th label(s) tch label(s) no analysts on COC at not received sted analysts	Trip B Trip B Trip B Receiv Receiv Number of E Number of 5	lank on COC but r lank received but i lank not intact ed Water Trip Blar ed Soil TB ncores?	not received not on COC	- -
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SAMPLE INSPECTION FORM

T30414: Chain of Custody Page 2 of 3



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JOB#:		T30414		DATE/TIME	RECEIVED:		6-4-9	915		
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COOLER#	SAMPLE ID	: FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	P	н
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905950	(ATIVEC: 1: N-	ne 2: HCL 3: HNO3 4: H2SO4 5: NA	1		1			5 6 7 8	- <2	-12
LOCATIO	N: 1: Walk-In # 8/13/01 ewp	#1 (Waters) 2: Walk-In #2 (Soils) VR: Vol	atile Fridge M: Meta	in 8: Other ils SUB; Subcontrac	t EF: Encore	Freezer	•			

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T30414: Chain of Custody Page 3 of 3







GC Volatiles



QC Data Summaries

Includes the following where applicable:

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



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
GKK1498-MB	KK031117	.D1	06/05/09	FÍ	n/a Î	n/a	GKK1498

The QC reported here applies to the following samples:

Method: SW846 8021B

T30414-1, T30414-2

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND ND	1.0 1.0 2.0 1.0	0.21 0.35 0.23 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	86% 1.2	58-12 73-13		



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
GKK1498-BS	KK031113	3.D 1	06/05/09	FI	n/a	n/a	GKK1498

The QC reported here applies to the following samples:

Method: SW846 8021B

T30414-1, T30414-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.1	96	86-121
100-41-4	Ethylbenzene	20	19.3	97	81-116
108-88-3	Toluene	20	19.3	97	87-117
1330-20-7	Xylenes (total)	60	57.7	96	85-115
95-47-6	o-Xylene	20	19.2	96	87-116
	m,p-Xylene	40	38.5	96	84-116
CAS No.	Surrogate Recoveries	BSP	Lin	nits	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	88% 91%	120 C 7 2 2	125% 139%	



Page 1 of 1

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T30414

MWHCODE Montgomery Watson Account:

San Juan Basin Pit Groundwater Remediation 2008-2009 Project:

Sample	File ID DF	Analyzed 06/05/09 06/05/09 06/05/09	By	Prep Date	Prep Batch	Analytical Batch
T30414-2MS	KK031124.D1		FI	n/a	n/a	GKK1498
T30414-2MSD	KK031125.D1		FI	n/a	n/a	GKK1498
T30414-2	KK031118.D1		FI	n/a	n/a	GKK1498
1						

The QC reported here applies to the following samples:

Method: SW846 8021B

T30414-1, T30414-2

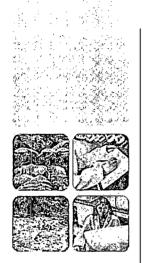
CAS No.	Compound	T30414-2 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	3.6 ND 1.4 ND ND ND	20 20 20 60 20 40	24.5 21.4 22.4 63.4 21.1 42.3	105 107 105 106 106	22.3 63.1 21.0	3-100 1-2 100 010 01 400 0	0	86-121/19 81-116/14 87-117/16 85-115/12 87-116/16 84-116/13
CAS No.	Surrogate Recoveries	MS	MSD	Т30	0414-2	Limits			
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	89% 91%	89% 91%			58-1259 73-1399	-		



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09/29/09



Technical Report for

Montgomery Watson

San Juan Basin Pit Groundwater Remediation

HORTON #E

Accutest Job Number: T37836

Sampling Date: 09/16/09

Report to:

Montgomery Watson

Jed.Smith@us.mwhglobal.com

ATTN: Jed Smith

Total number of pages in report: 17





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 Canevaro **Laboratory Director**

Paul K Canevaro

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)

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Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com

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3.2: T37836-2: HORTON 1E MW-2	7
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5.3: Matrix Spike/Matrix Spike Duplicate Summary	









Sample Summary

Montgomery Watson

Job No:

T37836

San Juan Basin Pit Groundwater Remediation Project No: HORTON #E

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
T37836-1	09/16/09	09:35 TU	09/17/09	AQ	Ground Water	HORTON IE-MW-1
T37836 2	09/16/09	10:43 TU	09/17/09	AQ	Ground Water	HORTÓN IE MW-2
T37836 3	© 09/16/09	11:28 TU	09/17/09	AQ	Ground Water	HORTON 1E MW-3
T37836-4	09/16/09	07:00 TU	09/17/09	AQ	Trip Blank Water	160909 TB01







SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Montgomery Watson

Job No

T37836

Site:

San Juan Basin Pit Groundwater Remediation

Report Date

9/22/2009 4:48:45 PM

3 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 09/16/2009 and were received at Accutest on 09/17/2009 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of T37836. 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 AO

Batch ID: GKK1554

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T37878-3MS, T37878-3MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Ethylbenzene, m,p-Xylene, o-Xylene, Toluene, Xylenes (total) are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Ethylbenzene, m,p-Xylene, o-Xylene, Xylenes (total) are outside control limits. Probable cause due to matrix interference.

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 o	of Analys	is	



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Client Sample ID: HORTON 1E MW-1

Lab Sample ID:

T37836-1

AQ - Ground Water SW846 8021B

DF

1

Date Sampled: 09/16/09

Date Received: 09/17/09

Prep Date

n/a

Percent Solids: n/a

Method: Project:

Matrix:

San Juan Basin Pit Groundwater Remediation

Analyzed

09/21/09

Analytical Batch Prep Batch GKK1554 n/a

Run #1 Run #2

Purge Volume

KK032485.D

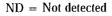
File ID

Run #1 $5.0 \, ml$

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	0.44 ND ND ND ND ND	1.0 1.0 2.0 1.0	0.36 0.28 0.25 0.93 0.36 0.57	ug/l ug/l ug/l ug/l ug/l ug/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	101% 122%	T Y X X X X X Y Y Y Y Y Y Y Y Y Y Y Y Y		25% 39%	



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



Report of Analysis

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Page 1 of 1

Client Sample ID:

HORTON 1E MW-2

DF

1

Lab Sample ID:

T37836-2

AQ - Ground Water

Date Sampled: 09/16/09 Date Received:

09/17/09

Matrix: Method:

SW846 8021B

Percent Solids: n/a

Prep Date

n/a

Project:

San Juan Basin Pit Groundwater Remediation

Analyzed

09/21/09

Prep Batch

n/a

Analytical Batch **GKK1554**

Run #1

Run #2

Purge Volume

KK032495.D

Run #1

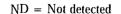
5.0 ml

File ID

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND	1.0 1.0 1.0 2.0 1.0	0.36 0.28 0.25 0.93 0.36 0.57	ug/l ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	96% 120%	The configuration of the confi		25% 39%	



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



Client Sample ID: HORTON 1E MW-3

Lab Sample ID:

T37836-3

AO - Ground Water SW846 8021B

DF

1

Date Sampled: Date Received:

09/16/09 09/17/09

Percent Solids: n/a

n/a

Method: Project:

Matrix:

San Juan Basin Pit Groundwater Remediation

Analyzed

09/21/09

Prep Date Prep Batch n/a

Q

Analytical Batch GKK1554

Run #1 Run #2

Purge Volume

KK032496.D

File ID

5.0 ml

Run #1

Run #2

Purgeable Aromatics

CAS No. Compound Result RL MDL Units 71-43-2 ND Benzene 0.36 ug/l ND 1.0 ND 2.0 ND 1.0 108-88-3 Toluene 0.28 ug/l 100-41-4 Ethylbenzene 0.25 ug/l 1330-20-7

Xylenes (total) 0.93ug/l o-Xylene 0.36 95-47-6 ug/l m,p-Xylene ND 1.0 0.57 ug/I

CAS No. Surrogate Recoveries Run#1 Run#2 Limits

Report of Analysis

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460-00-4 4-Bromofluorobenzene aaa-Trifluorotoluene 98-08-8

99% 121%

58-125% 73-139%



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



Report of Analysis

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Page 1 of 1

Client Sample ID: 160909 TB01

Lab Sample ID: T37836-4

File ID

5.0 ml

AQ - Trip Blank Water

DF

Date Sampled: Date Received:

09/16/09 09/17/09

Matrix: Method:

SW846 8021B

Percent Solids: n/a

Prep Date

n/a

Project:

San Juan Basin Pit Groundwater Remediation

Analyzed

09/21/09

Analytical Batch Prep Batch GKK1554 n/a

Run #1 Run #2

Purge Volume

KK032484.D

Run #1

Run #2

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND ND	1.0 1.0 1.0 2.0 1.0	0.36 0.28 0.25 0.93 0.36 0.57	ug/l ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	99% 120%	28. 1.000		25% 1 39 %	



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





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Misc. Forms	
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Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



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T37836: Chain of Custody

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Accutest Job Number: 137876	Client: MWH	Date/Time Received: 9-17-9 9	د [
of Coolers Received:Therr	nometer #:	Temperature Adjustment Factor: £ 4	
Cooler Temps: #1: 7.0° #2:	#3:#4:#5:	#6:#7:#8:	
Method of Delivery: FEDEX UPS	Accutest Courier Greyhound	Delivery Other	
Airbill Numbers:		, 	
COOLER INFORMATION	SAMPLE INFORMATION	TRIP BLANK INFORMATI	ON
Custody seal missing or not intact Temperature criteria not met Wet ice received in cooler	Sample containers received broken VOC vials have headspace Sample labels missing or illegible	Trip Blank on COC but not received Trip Blank received but not on COC Trip Blank not intact	
CHAIN OF CUSTODY Chain of Custody not received	ID on COC does not match label(s) D/T on COC does not match label(s) Sample/Bottles revd but no analysis on C	Received Water Trip Blank Received Soil TB	
Sample D/T unclear or missing Analyses unclear or missing COC not properly executed	Sample listed on COC, but not received Bottles missing for requested analysis Insufficient volume for analysis	Number of Encores? Number of 5035 kits?	_
Summary of Discrepancies:	Sample received improperly preserved	Number of lab-filtered metals?	-
TECHNICIAN SIGNATURE/DATE:		-9/179	· ·
INFORMATION AND SAMPLE LABELING VEI	RIFIED BY:		
	· · CORRECTIVE AC	TIONS · · · · · ·	• •
Client Representative Notified:	1.	Date:	
			
By Accutest Representative: Client Instructions:		Via: Phone Email	
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T37836: Chain of Custody

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T37836: Chain of Custody Page 3 of 3







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QC Data Summaries

Includes the following where applicable:

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



Page 1 of 1

Method Blank Summary

Job Number:

T37836

Account:

MWHCODE Montgomery Watson

Project:

San Juan Basin Pit Groundwater Remediation

Sample	File ID I	DF	Analyzed	By	Prep Date n/a	Prep Batch	Analytical Batch
GKK1554-MB	KK032483.D1	I	09/21/09	FI		n/a	GKK1554
GKK1334-MD	KKU32403.D I	L	03/21/03	1.1	II/a	11/ a	GKKIJJ4

The QC reported here applies to the following samples:

Method: SW846 8021B

T37836-1, T37836-2, T37836-3, T37836-4

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND ND		0.36 0.25 0.28 0.93 0.36 0.57	ug/l ug/l ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries		Limits		
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	99% 120%	58-125 73-139		



Blank Spike Summary

Job Number:

T37836

Account:

MWHCODE Montgomery Watson

Project:

San Juan Basin Pit Groundwater Remediation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1554-BS	KK032479.	D1	09/21/09	FI	n/a	n/a	GKK1554

The QC reported here applies to the following samples:

Method: SW846 8021B

T37836-1, T37836-2, T37836-3, T37836-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	20 20 20 60 20 40	19.3 21.3 20.6 63.1 21.3 41.8	97 107 103 105 107 105	86-121 81-116 87-117 85-115 87-116 84-116
CAS No. 460-00-4 98-08-8	Surrogate Recoveries 4-Bromofluorobenzene aaa-Trifluorotoluene	BSP 102% 122%	58-	nits -125% -139%	



Method: SW846 8021B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T37836

Account: MWHCODE Montgomery Watson

Project: San Juan Basin Pit Groundwater Remediation

Sample	File ID DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T37878-3MS	KK032489.D 1	09/21/09	FI	n/a	n/a	GKK1554
T37878-3MSD	KK032490.D 1	09/21/09	FI	n/a	n/a	GKK1554
T37878-3	KK032488.D 1	09/21/09	FI	n/a	n/a	GKK1554

The QC reported here applies to the following samples:

T37836-1, T37836-2, T37836-3, T37836-4

CAS No.	Compound	T37878-3 ug/l (Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	2.4 1.0 U 0.82 J 11.7 6.0 5.8	I	20 20 20 60 20 40	24.4 24.8 24.5 84.1 30.2 53.9	110 124* 118* 121* 121* 120*	24.9 24.3 83.9 30.2	125* 117 120*;		86-121/19 81-116/14 87-117/16 85-115/12 87-116/16 84-116/13
CAS No.	Surrogate Recoveries	MS		MSD	T37	7878-3	Limits			
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	103% 124%	440	106% 124%	101 123	% %	58-1259 73-1399			

