

Hooshang Hadjian
2108 San Ramon Valley Blvd.
San Ramon, CA 94583

Mr. Paresh Khatri
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED

2:13 pm, Jan 20, 2011

Alameda County
Environmental Health

Re: Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California
ACHCSA Case No. 304

Dear Mr.Chan:

I, Mr. Hooshang Hadjian, have retained Pangea Environmental Services, Inc. (Pangea) as the environmental consultant for the project referenced above. Pangea is submitting the attached report on my behalf.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report is true and correct to the best of my knowledge.

Sincerely,



Hooshang Hadjian



November 4, 2010

Mr. Kapil Mohan
Dublin San Ramon Services District
Regional Wastewater Treatment Facility
7399 Johnson Drive
Pleasanton, CA 94588

Re: **Monthly Discharge Compliance Report – October 2010**
Groundwater Remediation, 7240 Dublin Blvd, Dublin, California

Dear Mr. Mohan:

Pangea Environmental Services, Inc. (Pangea) has prepared this *Monthly Discharge Compliance Report – October 2010* for the subject site for the period of September 21 to October 27, 2010. As specified in the Industrial Wastewater Discharge Permit #10010 issued January 28, 2010, initial monthly discharge compliance reports are required by the Dublin San Ramon Services District (DSRSD). This report presents the monthly test results -- no regulated substances (petroleum hydrocarbons) were detected in the system effluent compliance point. Described below are background information, system operation and performance, system sampling, and future activities.

BACKGROUND INFORMATION

DPE system installation was required and approved by the Alameda County Environmental Health (ACEH) to cleanup residual petroleum hydrocarbons from a prior unauthorized release. The DPE system consists of an aboveground vacuum pump to simultaneously extract soil vapor and groundwater. The groundwater treatment equipment consists of a 120-gallon vapor/liquid separator (knockout tank), transfer pump, particulate filter vessel, two 1,000-lb activated carbon vessels connected in series, and a water totalizer meter. Once the transfer tank becomes full, the transfer pump is activated by level control switches in the transfer tank and pumps the groundwater through the water treatment system prior to discharge to the sanitary sewer under permit from the DSRSD.

SYSTEM OPERATION AND PERFORMANCE

The DPE system commenced continuous operation on Monday, September 20, 2010. As of the end of this reporting period (October 27, 2010), the DPE system extracted and treated approximately 22,889 gallons of groundwater. The groundwater flow rate has ranged from approximately 0.62 to 2.27 gpm, which includes any system shutdown periods. GWE system performance is summarized in Table 1.

PANGEA Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 Facsimile 510.836.3709 www.pangeaenv.com

SYSTEM SAMPLING

During this reporting period, samples were collected from the influent, midpoint and effluent (permit location IWD-001) of the groundwater treatment portion of the DPE system on October 14, 2010. The system operated for approximately 29 days of the 37 day reporting period. System flow data and groundwater analytical results are summarized on Table 1. Based on laboratory analytical results, the DPE system was operating in compliance with discharge permit conditions: no regulated substances (petroleum hydrocarbons) were detected in the system midpoint or effluent (permit location IWD-001). The laboratory analytical report is included in Appendix A.

PLANNED FUTURE ACTIVITIES

Current plans include DPE system operation for a total of a couple months.

CLOSING

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please email briddell@pangeaenv.com or call me at (510) 435-8664.

Sincerely,
Pangea Environmental Services, Inc.



Bob Clark-Riddell



ATTACHMENTS

Table 1 – Groundwater Extraction System Performance Summary
Appendix A – Laboratory Analytical Report

Pangea

Table 1. GWE (DPE) System Performance Summary - 7240 Dublin Blvd, Dublin, California

Well ID	Date	Totalizer Reading ¹ (gallons)	Interval Flow Volume (gallons)	Interval Duration (days)	Average Flow Rate (gpm)	TPHd Concentration (ug/L)	TPHg Concentration (ug/L)	Benzene Concentration (ug/L)	MTBE Concentration (ug/L)	TPHg Removed (Lbs)	Benzene Removed (Lbs)	MTBE Removed (Lbs)	Comments
System	09/20/10	0	0	0	--	---	---	---	---	0.000	0.000	0.000	System startup testing
Influent	09/21/10	1,725	1,725	1	1.20	1,900	3,400	110	1,800	0.049	0.002	0.026	Startup water sampling of influent
	09/29/10	7,104	7,104	8	0.62	---	---	---	---	0.201	0.006	0.106	
	10/08/10	13,091	13,091	9	1.01	---	---	---	---	0.370	0.012	0.196	
	10/14/10	17,023	17,023	6	1.97	430	220	ND (<0.5)	500	0.031	0.000	0.071	O&M Visit; sample collection
	10/20/10	19,351	19,351	6	2.24	---	---	---	---	0.035	0.000	0.080	
	10/27/10	21,052	21,052	7	2.09	---	---	---	---	0.039	0.000	0.088	
										0.725	0.020	0.567	Total Cumulative Removal (Lbs)
System	09/20/10	---	---	---	---	---	---	---	---	---	---	---	
Midpoint	09/21/10	---	---	---	---	ND (<50)	ND (<50)	ND (<0.5)	ND (<5.0)	---	---	---	Startup water sampling of midpoint
	10/14/10	---	---	---	---	ND (<50)	ND (<50)	ND (<0.5)	ND (<5.0)	---	---	---	O&M Visit; sample collection
System	09/20/10	---	---	---	---	---	---	---	---	---	---	---	
Effluent	09/21/10	---	---	---	---	ND (<50)	ND (<50)	ND (<0.5)	ND (<5.0)	---	---	---	Startup water sampling of effluent
	10/14/10	---	---	---	---	ND (<50)	ND (<50)	ND (<0.5)	ND (<5.0)	---	---	---	O&M Visit; sample collection

<i>Discharge Limit</i>	15,000	15,000	1,000	1,000,000
	<i>(TPHg+TPHd)</i>	<i>(TPHg+TPHd)</i>	<i>(BTEX Total)</i>	<i>(MTBE)</i>

ABBREVIATIONS AND NOTES:

1 = Initial totalizer reading was 9,997,126 (or -2,874 gallons). After reaching 9,999,999 the meter returns to 0,000,000. Therefore, shown reading above 0 is actual reading plus 2,874. The 9/21/10 reading of 9,998,851 less 9,997,126 equals 1,725 gallons discharged.

gpm = Gallons per minute

TPHd = Total Petroleum Hydrocarbon as Diesel analyzed by EPA Method 8015B with silica gel cleanup

TPHg = Total Petroleum Hydrocarbon as Gasoline analyzed by EPA Method 8015B

Benzene analyzed by EPA Method 8021B

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021 Cm

-- = not measured/not available

* Estimated contaminant mass calculated by multiplying average concentration detected during period (Table 1) by volume of extracted groundwater. Uses most recent lab data.

APPENDIX A

Laboratory Analytical Report



McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mcccampbell.com E-mail: main@mcccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #7240 Dublin Blvd	Date Sampled: 10/14/10
		Date Received: 10/14/10
	Client Contact: Tina De La Fuente	Date Reported: 10/21/10
	Client P.O.:	Date Completed: 10/21/10

WorkOrder: 1010410

October 21, 2010

Dear Tina:

Enclosed within are:

- 1) The results of the **5** analyzed samples from your project: **#7240 Dublin Blvd**,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

1010410

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565

Website: www.mccampbell.com Email: main@mccampbell.com

Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

EDF Required? Coelt (Normal) No Write On (DW) No RUSH 24 HR 48 HR 72 HR 5 DAY

Report To: Tina de la Fuente Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: tdela Fuente@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
Project #: 7240 Dublin Blvd Project Name: 7240 Dublin Blvd
Project Location: 7240 Dublin Blvd., Dublin, CA
Sampler Signature:

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
INF-A	INF	10/14/10	1206	1	Fedler			X									Filter Samples for Metals analysis: Yes / No
EFF-A	EFF	16/14/10	1205	1	↓			X									
INF-W	INF	↓	1152	5	↓ via Ambient	X					X	X	X	X			
MID-W	MID	↓	1220	↓	↓	X					X	X	X	X			
EFF-W	EFF	↓	1150	↓	↓	X					X	X	X	X			

Relinquished By:	Date: 10/14/10	Time: 1342	Received By: Envirotech DM	COMMENTS: Report AIR IN PPMV VOAS O&G METALS OTHER PRESERVATION pH<2
Relinquished By: Envirotech DM	Date: 10/14/10	Time: 3:20p	Received By:	
Relinquished By:	Date: 10/14	Time: 1545	Received By:	

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1010410

ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:		Bill to:	Requested TAT: 5 days
Tina De La Fuente	Email: tdelafuente@pangeaenv.com	Bob Clark-Riddell	
Pangea Environmental Svcs., Inc.	cc:	Pangea Environmental Svcs., Inc.	Date Received: 10/14/2010
1710 Franklin Street, Ste. 200	PO:	1710 Franklin Street, Ste. 200	Date Printed: 10/14/2010
Oakland, CA 94612	ProjectNo: #7240 Dublin Blvd	Oakland, CA 94612	
(510) 836-3700 FAX (510) 836-3709			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1010410-001	INF-A	Air	10/14/2010 12:06	<input type="checkbox"/>	A		A										
1010410-002	EFF-A	Air	10/14/2010 12:05	<input type="checkbox"/>	A												
1010410-003	INF-W	Water	10/14/2010 11:52	<input type="checkbox"/>		B	A										
1010410-004	MID-W	Water	10/14/2010 12:20	<input type="checkbox"/>		B	A										
1010410-005	EFF-W	Water	10/14/2010 11:50	<input type="checkbox"/>		B	A										

Test Legend:

1	G-MBTEX_AIR	2	G-MBTEX_W	3	PREFD REPORT	4	TPH(D)WSG_W	5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A contain testgroup.

Prepared by: Ana Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **10/14/2010 5:20:50 PM**

Project Name: **#7240 Dublin Blvd**

Checklist completed and reviewed by: **Ana Venegas**

WorkOrder N°: **1010410** Matrix Air/Water

Carrier: Derik Cartan (MAI Courier)

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
 - Container/Temp Blank temperature Cooler Temp: 6.2°C NA
 - Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 - Sample labels checked for correct preservation? Yes No
 - Metal - pH acceptable upon receipt (pH<2)? Yes No NA
 - Samples Received on Ice? Yes No
- (Ice Type: WET ICE)

* NOTE: If the "No" box is checked, see comments below.

Client contacted:

Date contacted:

Contacted by:

Comments:



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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #7240 Dublin Blvd	Date Sampled: 10/14/10
		Date Received: 10/14/10
	Client Contact: Tina De La Fuente	Date Extracted: 10/14/10-10/15/10
	Client P.O.:	Date Analyzed: 10/14/10-10/15/10

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1010410

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-A	A	1500	ND<25	8.2	31	13	100	2	85	d1
002A	EFF-A	A	ND	ND	ND	ND	ND	ND	1	96	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	0.25	μg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in μg/L, soil/sludge/solid samples in mg/kg, wipe samples in μg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant



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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #7240 Dublin Blvd	Date Sampled: 10/14/10
		Date Received: 10/14/10
	Client Contact: Tina De La Fuente	Date Extracted: 10/15/10-10/18/10
	Client P.O.:	Date Analyzed: 10/15/10-10/18/10

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1010410

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
003B	INF-W	W	220	500	ND	ND	ND	ND	1	85	d2,d9
004B	MID-W	W	ND	ND	ND	ND	ND	ND	1	90	
005B	EFF-W	W	ND	ND	ND	ND	ND	ND	1	94	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

%SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d2) heavier gasoline range compounds are significant (aged gasoline?)
d9) no recognizable pattern



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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #7240 Dublin Blvd	Date Sampled: 10/14/10
		Date Received: 10/14/10
	Client Contact: Tina De La Fuente	Date Extracted: 10/14/10
	Client P.O.:	Date Analyzed 10/20/10

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method SW3510C/3630C

Analytical methods: SW8015B

Work Order: 1010410

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1010410-003A	INF-W	W	430	1	83	e4,e2
1010410-004A	MID-W	W	ND	1	80	
1010410-005A	EFF-W	W	ND	1	75	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.



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		Date Received: 10/14/10
	Client Contact: Tina De La Fuente	Date Extracted: 10/14/10-10/15/10
	Client P.O.:	Date Analyzed: 10/14/10-10/15/10

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1010410

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-A	A	410	ND<5.0	2.5	8.1	3.0	23	2	85	d1
002A	EFF-A	A	ND	ND	ND	ND	ND	ND	1	96	

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* vapor samples are reported in µL/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L, water samples and all TCLP & SPLP extracts are reported in µg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water/Air

QC Matrix: Water

BatchID: 53705

WorkOrder 1010410

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1010362-001A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	104	105	0.887	106	108	1.16	70 - 130	20	70 - 130	20
MTBE	ND	10	101	102	1.35	109	107	1.71	70 - 130	20	70 - 130	20
Benzene	ND	10	94.5	91.2	3.56	94.4	93.9	0.515	70 - 130	20	70 - 130	20
Toluene	ND	10	95.7	90.4	5.76	94.8	94.1	0.748	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	94.6	91.1	3.76	93.3	93.5	0.185	70 - 130	20	70 - 130	20
Xylenes	ND	30	97.1	93.2	4.09	95.8	95.8	0	70 - 130	20	70 - 130	20
%SS:	104	10	97	96	1.44	97	97	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 53705 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010410-001A	10/14/10 12:06 PM	10/15/10	10/15/10 6:55 PM	1010410-002A	10/14/10 12:05 PM	10/14/10	10/14/10 8:17 PM
1010410-003B	10/14/10 11:52 AM	10/15/10	10/15/10 9:44 PM	1010410-003B	10/14/10 11:52 AM	10/18/10	10/18/10 7:36 PM
1010410-004B	10/14/10 12:20 PM	10/15/10	10/15/10 10:52 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53812

WorkOrder 1010410

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1010410-005B			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) ^f	ND	60	108	106	2.19	109	106	2.46	70 - 130	20	70 - 130	20
MTBE	ND	10	107	111	3.05	110	110	0	70 - 130	20	70 - 130	20
Benzene	ND	10	96.4	98.5	2.20	98.4	98.2	0.178	70 - 130	20	70 - 130	20
Toluene	ND	10	96.9	99.3	2.43	101	99	1.91	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	96.5	98	1.46	98.1	98.2	0.0453	70 - 130	20	70 - 130	20
Xylenes	ND	30	99.4	101	1.32	100	101	0.184	70 - 130	20	70 - 130	20
%SS:	94	10	95	97	1.26	98	98	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 53812 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010410-005B	10/14/10 11:50 AM	10/15/10	10/15/10 11:25 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53813

WorkOrder 1010410

EPA Method SW8015B		Extraction SW3510C/3630C							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	120	120	0	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	105	105	0	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 53813 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1010410-003A	10/14/10 11:52 AM	10/14/10	10/20/10 7:23 PM	1010410-004A	10/14/10 12:20 PM	10/14/10	10/20/10 8:29 PM
1010410-005A	10/14/10 11:50 AM	10/14/10	10/20/10 9:34 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.