

Mr. Keith Nowell
Alameda County Environmental Health
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

Re: Former Exxon Station

5175 Broadway
Oakland, California
ACEH File No. 139
SFRWQCB Site No. 01-0958
UST Fund Claim No. 3406

RECEIVED

11:31 am, May 22, 2012

Alameda County
Environmental Health

Dear Mr. Nowell:

I, Mr. Ernie Nadel, 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 are true and correct to the best of my knowledge.

Sincerely,



Ernie Nadel
Rockridge Heights, LLC



October 11, 2011

Deidre Mena
EBMUD
Environmental Services Division
P.O. Box 24055, MS#702
Oakland, CA 94623-1055

Re: **Semi-Annual Discharge Compliance Report – April 2011 to September 2011**
Groundwater Remediation, 5175 Broadway, Oakland, California

Dear Ms. Mena:

Pangea Environmental Services, Inc. (Pangea) has prepared this *Semi-Annual Discharge Compliance Report – April 2011 to September 2011* for the subject site for the period of April 1, 2011 to September 26, 2011. As specified in the Wastewater Discharge Permit #50649181 issued August 20, 2010, discharge compliance reports are required semi-annually by the East Bay Municipal Utility District (EBMUD). This report presents the semi-annual test results -- no regulated substances (petroleum hydrocarbons) were detected in the system effluent compliance point. Described below are background information, system operation and performance, and system sampling.

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 200-gallon vapor/liquid separator (knockout tank), transfer pump, a particulate filter vessel, two 200-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 EBMUD.

SYSTEM OPERATION AND PERFORMANCE

The DPE system commenced continuous operation on Wednesday, December 8, 2010. As of the end of this reporting period (September 26, 2011), the DPE system extracted and treated approximately 65,389 gallons of groundwater. The average groundwater flow rate has ranged from approximately 0.01 to 0.6 gpm, which includes system shutdown periods. GWE system performance is summarized in Table 1. No hazardous waste was removed from the site during this reporting period.

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 and effluent ports of the groundwater treatment system on May 24 and July 26, 2011. Influent samples were also collected on April 12, 2011. The system operated for approximately 114 days of the 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 effluent. The laboratory analytical reports are included in Appendix A.

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 mgillies@pangeaenv.com or call me at (408)910-1783.

Sincerely,
Pangea Environmental Services, Inc.



Morgan Gillies

ATTACHMENTS

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

APPENDIX A

Laboratory Analytical Reports

Pangea

Table 1. GWE (DPE) System Performance Summary - 5175 Broadway, Oakland, California

Well ID	Date	Totalizer Reading ¹ (gallons)	Interval Flow Volume (gallons)	Interval Duration (days)	Average Flow Rate (gpm)	TPHg Concentration (ug/L)	Benzene Concentration (ug/L)	MTBE Concentration (ug/L)	TPHg Removed (Lbs)	Benzene Removed (Lbs)	MTBE Removed (Lbs)	Comments
System	12/08/10	0	0	0	--	--	--	--	0.000	0.000	0.000	System startup testing, water not discharged to sewer yet.
Influent	12/10/10	248	248	2	0.09	--	--	--	0.000	0.000	0.000	Off; restart.
	12/14/10	1,120	872	4	0.15	300	4.6	ND (<5.0)	0.002	0.000	0.000	Startup water sampling of influent (12/14)
	12/22/10	3,585	2,465	8	0.21	--	--	--	0.006	0.000	0.000	On. Shutdown due to noise, restarted 12/29.
	01/07/11	7,622	4,037	16	0.18	--	--	--	0.010	0.000	0.000	On. System off 1/14 due to noise, restart 1/19.
	02/02/11	16,840	9,218	26	0.25	1,300	52	ND (<10)	0.100	0.004	0.000	Off on arrival; add oil and restart.
	02/22/11	25,427	8,587	20	0.30	680	8.4	ND (<5.0)	0.049	0.001	0.000	On. Add more oil.
	02/28/11	28,855	3,428	6	0.40	--	--	--	0.019	0.000	0.000	On. Shutdown for GWM and restarted.
	03/09/11	31,981	3,126	9	0.24	--	--	--	0.018	0.000	0.000	On.
	03/15/11	34,398	2,417	6	0.28	--	--	--	0.014	0.000	0.000	On.
	03/16/11	34,961	563	1	0.39	--	--	--	0.003	0.000	0.000	On.
	03/31/11	36,763	1,802	15	0.08	--	--	--	0.010	0.000	0.000	Off. Add more soundproofing and restart.
	04/06/11	39,571	2,808	6	0.33	--	--	--	0.016	0.000	0.000	On.
	04/12/11	39,671	100	6	0.01	240	4.8	ND (<5.0)	0.000	0.000	0.000	See NOTE below.
	04/26/11	41,195	1,524	14	0.08	--	--	--	0.003	0.000	0.000	On.
	05/04/11	41,703	508	8	0.04	--	--	--	0.001	0.000	0.000	Off. Pump overheating. Restart
	05/24/11	42,965	1,262	20	0.04	66	0.92	ND (<5.0)	0.001	0.000	0.000	Off. Restart
	06/02/11	43,908	943	9	0.07	--	--	--	0.001	0.000	0.000	On.
	06/06/11	47,392	3,484	4	0.60	--	--	--	0.002	0.000	0.000	Off on arrival; restart. Off on departure
	07/13/11	48,851	1,459	37	0.03	--	--	--	0.001	0.000	0.000	Off on arrival; restart.
	07/21/11	51,271	2,420	8	0.21	--	--	--	0.001	0.000	0.000	Off. Restart.
	07/26/11	53,411	2,140	5	0.30	68	0.51	ND (<5.0)	0.001	0.000	0.000	On.
	07/28/11	54,069	658	2	0.23	--	--	--	0.000	0.000	0.000	On.
	08/08/11	55,829	1,760	11	0.11	--	--	--	0.001	0.000	0.000	Off. Restart.
	08/18/11	60,036	4,207	10	0.29	--	--	--	0.002	0.000	0.000	On.
	08/31/11	61,771	1,735	13	0.09	--	--	--	0.001	0.000	0.000	Off. Restart.
	09/22/11	65,179	3,408	22	0.11	--	--	--	0.002	0.000	0.000	Off. Restart.
	09/26/11	65,389	210	4	0.04	--	--	--	0.000	0.000	0.000	Off. Restart.
									0.264	0.006	0.000	Total Cumulative Removal (Lbs)
System	04/12/11	--	--	--	--	ND (<50)	ND (<0.5)	ND (<5.0)	--	--	--	See NOTE below.
Midpoint	05/24/11	--	--	--	--	ND (<50)	ND (<0.5)	ND (<5.0)	--	--	--	
	07/26/11	--	--	--	--	ND (<50)	ND (<0.5)	ND (<5.0)	--	--	--	
System	12/08/10	--	--	--	--	--	--	--	--	--	--	
Effluent	12/14/10	--	--	--	--	ND (<50)	ND (<0.5)	ND (<5.0)	--	--	--	Startup water sampling of effluent (12/14)
	02/22/11	--	--	--	--	ND (<50)	ND (<0.5)	ND (<5.0)	--	--	--	
	05/24/11	--	--	--	--	ND (<50)	ND (<0.5)	ND (<5.0)	--	--	--	
	07/26/11	--	--	--	--	ND (<50)	ND (<0.5)	ND (<5.0)	--	--	--	

<i>Discharge Limits (ug/L):</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>
	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i>	<i>Total Xylenes</i>

ABBREVIATIONS AND NOTES:

NOTE = Based on previous and subsequent analytical results Pangea switched the 4/12/11 analytical results for System Influent and Midpoint. Pangea suspects that the samples were accidentally switched by the lab or mislabeled by the technician.

1 = Initial totalizer reading was 23,559. Therefore, shown reading above 0 is actual reading minus 23,559. The 12/10/10 reading of 23,807 less 23,559 equals 248 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

Toulene, Ethylbenzene and Total Xylenes analyzed by EPA Method 8015B

-- = 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.

**Unless noted Toulene, Ethylbenzene and Total Xylenes non-detect (<0.5)

APPENDIX A

Laboratory Analytical Reports



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: #5175 Broadway; Rockridge Height	Date Sampled: 05/24/11
		Date Received: 05/26/11
	Client Contact: Morgan Gillies	Date Reported: 06/02/11
	Client P.O.:	Date Completed: 05/31/11

WorkOrder: 1105806

June 02, 2011

Dear Morgan:

Enclosed within are:

- 1) The results of the **5** analyzed samples from your project: **#5175 Broadway; Rockridge Height,**
- 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.

1105806

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd.
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

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: **Morgan Gillies** Bill To: **Pangea**
 Company: **Pangea Environmental Services, Inc.**
 1710 Franklin Street, Suite 200, Oakland, CA 94612
 E-Mail: **mgillies@pangeaenv.com**
 Tele: **(510) 836-3702** Fax: **(510) 836-3709**
 Project #: **5175 Broadway** Project Name: **Rockridge Heights**
 Project Location: **5175 Broadway, Oakland, CA**
 Sampler Signature: * *Steve Hood*

Analysis Request										Other	Comments							
BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) with Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	5 Oxygenates(TAME, TBA, DIPE, ETBE, MTBE) by 8260.		Filter Samples for Metals analysis: Yes / No

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other				
EFF-W	EFF	5-24-11	1450	3	Wob's	X					X	X						
MID-W	MID	↓	1500	3	↓	X					X	X						
INF-W	INF	↓	1510	3	↓	X					X	X						
EFF-V	EFF	↓	1530	1	Tech Jar		X				X							
INF-V	INF	↓	1545	1	↓		X				X							

Relinquished By: *Steve Hood* Date: 5/25/11 Time: 0930 Received By: *[Signature]*
 Relinquished By: *[Signature]* Date: 5/26/11 Time: 16:57 Received By: *[Signature]*
 Relinquished By: *[Signature]* Date: 5/26/11 Time: 16:20 Received By: *[Signature]*

ICE/t° **7.6**
 GOOD CONDITION ✓
 HEAD SPACE ABSENT ✓
 DECHLORINATED IN LAB ✓
 APPROPRIATE CONTAINERS ✓
 PRESERVED IN LAB ✓
 COMMENTS:
 VOAS O&G METALS OTHER
 PRESERVATION ✓ pH<2

McC Campbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1105806

ClientCode: PEO

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Report to: Morgan Gillies
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX (510) 836-3709

Email: mgillies@pangeaenv.com
cc:
PO:
ProjectNo: #5175 Broadway; Rockridge Height

Bill to: Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: **5 days**
Date Received: 05/26/2011
Date Printed: 05/26/2011

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	
1105806-001	EFF-W	Water	5/24/2011 14:50	<input type="checkbox"/>		A											
1105806-002	MID-W	Water	5/24/2011 15:00	<input type="checkbox"/>		A											
1105806-003	INF-W	Water	5/24/2011 15:10	<input type="checkbox"/>		A											
1105806-004	EFF-V	Air	5/24/2011 15:30	<input type="checkbox"/>	A												
1105806-005	INF-V	Air	5/24/2011 15:45	<input type="checkbox"/>	A												

Test Legend:

1	G-MBTEX AIR	2	G-MBTEX W	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 004A, 005A contain testgroup.

Prepared by: Maria 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.**
Project Name: **#5175 Broadway; Rockridge Height**
WorkOrder N°: **1105806** Matrix Air/Water

Date and Time Received: **5/26/2011 4:25:47 PM**
Checklist completed and reviewed by: **Maria Venegas**
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: 7.6°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: #5175 Broadway; Rockridge Height	Date Sampled: 05/24/11
	Client Contact: Morgan Gillies	Date Received: 05/26/11
	Client P.O.:	Date Extracted: 05/26/11-05/27/11
		Date Analyzed: 05/26/11-05/27/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1105806

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
004A	EFF-V	A	ND	ND	ND	ND	ND	ND	1	97	
005A	INF-V	A	570	ND<10	3.2	1.7	ND	3.0	1	111	d1

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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	Client Contact: Morgan Gillies	Date Received: 05/26/11
	Client P.O.:	Date Extracted: 05/26/11-05/27/11
		Date Analyzed: 05/26/11-05/27/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1105806

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
004A	EFF-V	A	ND	ND	ND	ND	ND	ND	1	97	
005A	INF-V	A	160	ND<3.0	0.97	0.44	ND	0.69	1	111	d1

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



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	Client Contact: Morgan Gillies	Date Received: 05/26/11
	Client P.O.:	Date Extracted: 05/27/11-05/31/11
		Date Analyzed: 05/27/11-05/31/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1105806

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	EFF-W	W	ND	ND	ND	ND	ND	ND	1	102	
002A	MID-W	W	ND	ND	ND	ND	ND	ND	1	99	
003A	INF-W	W	66	ND	0.92	0.72	ND	2.6	1	98	d1

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:

d1) weakly modified or unmodified gasoline is significant



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air

QC Matrix: Water

BatchID: 58585

WorkOrder 1105806

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1105714-001A			
	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	82.9	85.1	2.69	88.9	87.5	1.63	70 - 130	20	70 - 130	20
MTBE	ND	10	112	91.8	19.7	106	111	4.15	70 - 130	20	70 - 130	20
Benzene	ND	10	103	101	1.81	101	98.2	3.28	70 - 130	20	70 - 130	20
Toluene	ND	10	102	99.6	2.34	98.2	97.6	0.581	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	99.8	97.7	2.11	98.9	96.3	2.62	70 - 130	20	70 - 130	20
Xylenes	ND	30	102	99.4	2.59	101	98.9	1.96	70 - 130	20	70 - 130	20
%SS:	102	10	101	104	2.95	100	98	2.46	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 58585 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105806-004A	05/24/11 3:30 PM	05/26/11	05/26/11 8:40 PM	1105806-005A	05/24/11 3:45 PM	05/27/11	05/27/11 5:57 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: 58585

WorkOrder 1105806

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1105714-001A			
	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	82.9	85.1	2.69	88.9	87.5	1.63	70 - 130	20	70 - 130	20
MTBE	ND	10	112	91.8	19.7	106	111	4.15	70 - 130	20	70 - 130	20
Benzene	ND	10	103	101	1.81	101	98.2	3.28	70 - 130	20	70 - 130	20
Toluene	ND	10	102	99.6	2.34	98.2	97.6	0.581	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	99.8	97.7	2.11	98.9	96.3	2.62	70 - 130	20	70 - 130	20
Xylenes	ND	30	102	99.4	2.59	101	98.9	1.96	70 - 130	20	70 - 130	20
%SS:	102	10	101	104	2.95	100	98	2.46	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 58585 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105806-001A	05/24/11 2:50 PM	05/31/11	05/31/11 5:53 PM	1105806-002A	05/24/11 3:00 PM	05/31/11	05/31/11 6:25 PM
1105806-003A	05/24/11 3:10 PM	05/27/11	05/27/11 6:55 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.



Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: Rockridge Heights	Date Sampled: 07/26/11
		Date Received: 07/28/11
	Client Contact: Morgan Gillies	Date Reported: 08/02/11
	Client P.O.:	Date Completed: 08/01/11

WorkOrder: 1107832

August 02, 2011

Dear Morgan:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **Rockridge Heights**,
- 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.

The analytical results relate only to the items tested.

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Rd.
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

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Morgan Gillies Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
Project #: 5175 Broadway Project Name: Rockridge Heights
Project Location: 5175 Broadway, Oakland, CA
Sampler Signature: *[Signature]*

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
EFF-W	EFF	7-26-11	1240	3	Voa	X					X	X					Filter Samples for Metals analysis: Yes / No
MID-W	MID	↓	1300	↓	↓	X					X	X					
INF-W	INF	↓	1310	↓	↓	X					X	X					

Relinquished By: <i>[Signature]</i>	Date: 7-28-11	Time: 1700	Received By: <i>[Signature]</i>
Relinquished By: <i>[Signature]</i>	Date: 7/28/11	Time: 1700	Received By: <i>[Signature]</i>
Relinquished By: <i>[Signature]</i>	Date: 7/28/11	Time: 1728	Received By: <i>[Signature]</i>

ICE/r° 7.5
 GOOD CONDITION _____
 HEAD SPACE ABSENT _____
 DECHLORINATED IN LAB _____
 APPROPRIATE CONTAINERS _____
 PRESERVED IN LAB _____

VOAS O&G METALS OTHER
 PRESERVATION pH<2

COMMENTS:

McC Campbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1107832

ClientCode: PEO

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Report to:

Morgan Gillies
 Pangea Environmental Svcs., Inc.
 1710 Franklin Street, Ste. 200
 Oakland, CA 94612
 (510) 836-3700 FAX: (510) 836-3709

Email: mgillies@pangeaenv.com
 cc:
 PO:
 ProjectNo: Rockridge Heights

Bill to:

Bob Clark-Riddell
 Pangea Environmental Svcs., Inc.
 1710 Franklin Street, Ste. 200
 Oakland, CA 94612

Requested TAT:

5 days

Date Received: **07/28/2011**

Date Printed: **07/28/2011**

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	
1107832-001	EFF-W	Water	7/26/2011 12:40	<input type="checkbox"/>	A												
1107832-002	MID-W	Water	7/26/2011 13:00	<input type="checkbox"/>	A												
1107832-003	INF-W	Water	7/26/2011 13:10	<input type="checkbox"/>	A												

Test Legend:

1	G-MBTEX_W	2		3		4		5	
6		7		8		9		10	
11		12							

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: **7/28/2011 8:02:17 PM**

Project Name: **Rockridge Heights**

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

WorkOrder N°: **1107832** Matrix: Water

Carrier: Benjamin Yslas (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: 7.8°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:



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: Rockridge Heights	Date Sampled: 07/26/11
		Date Received: 07/28/11
	Client Contact: Morgan Gillies	Date Extracted: 07/29/11-07/30/11
	Client P.O.:	Date Analyzed: 07/29/11-07/30/11

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1107832

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	EFF-W	W	ND	ND	ND	ND	ND	ND	1	98	
002A	MID-W	W	ND	ND	ND	ND	ND	ND	1	98	
003A	INF-W	W	68	ND	0.51	ND	ND	1.2	1	104	d1

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:
d1) weakly modified or unmodified gasoline is significant



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 60046

WorkOrder: 1107832

EPA Method: SW8021B/8015Bm		Extraction: SW5030B							Spiked Sample ID: 1107771-098A			
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(btex) [£]	ND	60	105	102	2.69	104	102	2.32	70 - 130	20	70 - 130	20
MTBE	ND	10	114	110	3.06	107	111	2.83	70 - 130	20	70 - 130	20
Benzene	ND	10	102	99.1	2.76	99.5	99.3	0.170	70 - 130	20	70 - 130	20
Toluene	ND	10	102	99.2	3.27	98.2	99.4	1.17	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	101	98.5	2.84	98.4	98.1	0.278	70 - 130	20	70 - 130	20
Xylenes	ND	30	104	102	2.67	101	101	0	70 - 130	20	70 - 130	20
%SS:	104	10	99	99	0	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 60046 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1107832-001A	07/26/11 12:40 PM	07/29/11	07/29/11 9:49 PM	1107832-002A	07/26/11 1:00 PM	07/29/11	07/29/11 10:20 PM
1107832-003A	07/26/11 1:10 PM	07/30/11	07/30/11 12:20 AM				

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.