December 28, 2011

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

Re: **Discharge Compliance Report – Second Half 2011**
1230 14th Street, Oakland, California

Dear Ms. Kulka:

Pangea Environmental Services, Inc. (Pangea) has prepared this *Discharge Compliance Report – Second Half 2011* for the subject site as specified in the Wastewater Discharge Permit #5064043 2 issued August 17, 2010. There were no hazardous waste offhauls or operational changes at the site during this half year. This report presents analytical test results -- no regulated substances (petroleum hydrocarbons) were detected in the system effluent compliance point.

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 vapor/liquid separator (knockout tank), transfer pump, a 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 EBMUD.

SYSTEM OPERATION AND PERFORMANCE

DPE system operation commenced on April 27, 2011. As of December 14, 2011, the DPE system operated for a total of about 923 hours (approximately 38 days). As of the end of this reporting period (December 14, 2011), the DPE system extracted and treated approximately 107,070 gallons of groundwater. The average groundwater flow rate during the second half of 2011 has ranged from approximately 0.01 to 0.14 gpm, which includes system shutdown periods. GWE system performance is summarized in Table 1.

SYSTEM SAMPLING

During this reporting period, samples were collected from the influent and effluent ports of the groundwater treatment system on December 14, 2011. The system operated for approximately 17 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 report is 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
Project Manager

ATTACHMENTS

Table 1 – GWE (DPE) System Performance Summary
Appendix A – Laboratory Analytical Report

Pangea

Table 1. GWE (DPE) System Performance Summary - 1230 14th Street, Oakland, California

Well ID	Date	Totalizer Reading (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
	03/03/11	251	251	0	---	**960**	**120**	**ND (<5.0)**	0.002	0.000	0.000	Starup water sampling of influent (3/7/11)
	04/12/11	965	714	40	0.01	---	---	---	0.006	0.001	0.000	Off.
System	04/27/11	2,090	1,125	15	0.05	---	---	---	0.009	0.001	0.000	On.
Influent	05/05/11	62,822	60,732	8	5.27	---	---	---	0.485	0.061	0.000	On.
	05/16/11	100,689	37,867	11	2.39	---	---	---	0.302	0.038	0.000	On.
	05/24/11	101,686	997	8	0.09	---	---	---	0.008	0.001	0.000	Off. Shutdown 5/19 due to high EFF-V conc.
	07/13/11	101,686	0	50	0.00	---	---	---	0.000	0.000	0.000	Off. Restart, check cat cell. Send for repair.
	09/06/11	102,753	1,067	55	0.01	---	---	---	0.009	0.001	0.000	Off. Restart, off at departure.
	10/24/11	102,753	0	48	0.00	---	---	---	0.000	0.000	0.000	Off. Restart, install new cat cell. Off at departure.
	11/22/11	103,480	727	29	0.02	---	---	---	0.006	0.001	0.000	Off. Restart.
	11/23/11	103,593	113	1	0.08	---	---	---	0.001	0.000	0.000	Off. Restart.
	11/28/11	104,011	418	5	0.06	---	---	---	0.003	0.000	0.000	Off. Restart.
	11/29/11	104,105	94	1	0.07	---	---	---	0.001	0.000	0.000	Off. Restart.
	12/14/11	107,070	2,965	15	0.14	**320**	**8.9**	**ND (<5.0)**	0.008	0.000	0.000	On.
									0.839	**0.103**	**0.000**	**Total Cumulative Removal (Lbs)**
System	3/7/2011**	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	Startup water sampling of effluent
Effluent	12/14/2011**	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	

Discharge Limits (ug/L):	***5***	***5***	***5***	***5***
	Benzene	***Toluene***	***Ethylbenzene***	***Total Xylenes***

ABBREVIATIONS AND NOTES:

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 Report

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St.	Date Sampled: 12/14/11
		Date Received: 12/16/11
	Client Contact: Morgan Gillies	Date Reported: 12/22/11
	Client P.O.:	Date Completed: 12/19/11

WorkOrder: 1112519

December 22, 2011

Dear Morgan:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#1150.001; 1230 14th St.,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

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 McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

1112519

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 ☐ 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 #: 1150.001 Project Name: 1230 14th St
Project Location: 1230 14th St., Oakland
Sampler Signature:

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Other	Comments
EFF-W	EFF	12-14-1	0930	3	Voa	X					X	X			X		
INF-W	INF	12-14-1	0945	3	↓	X					X	X			X		

Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
	12-16-1	1430	
Relinquished By:	Date:	Time:	Received By:
	12/16/1	1620	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 0.3
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓		pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1112519 **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: #1150.001; 1230 14th St.

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

Requested TAT: **5 days**

Date Received: **12/16/2011**
Date Printed: **12/16/2011**

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
1112519-001	EFF-W	Water	12/14/2011 9:30	☐	A	A										
1112519-002	INF-W	Water	12/14/2011 9:45	☐	A											

Test Legend:

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

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.

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Sample Receipt Checklist

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

Date and Time Received: **12/16/2011 4:38:37 PM**

Project Name: **#1150.001; 1230 14th St.**

Checklist completed and reviewed by: Maria Venegas

WorkOrder N°: **1112519** Matrix: Water

Carrier: Rob Pringle (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: 6.3°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.*

Comments:

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1150.001; 1230 14th St. Client Contact: Morgan Gillies Client P.O.:	Date Sampled: 12/14/11 Date Received: 12/16/11 Date Extracted: 12/18/11-12/19/11 Date Analyzed: 12/18/11-12/19/11

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 1112519

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	100	
002A	INF-W	W	320	ND	8.9	17	4.1	86	1	109	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	µg/L
	S	1.0	0.05	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 McCampbell Analytical is not responsible for their interpretation:
d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 63389 | WorkOrder: 1112519

EPA Method: SW8021B/8015Bm **Extraction: SW5030B** **Spiked Sample ID: 1112499-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
TPH(btex)£	ND	60	81.6	82.6	1.25	98.6	70 - 130	20	70 - 130
MTBE	ND	10	113	108	4.20	115	70 - 130	20	70 - 130
Benzene	ND	10	100	96.9	3.22	112	70 - 130	20	70 - 130
Toluene	ND	10	103	99.5	3.34	107	70 - 130	20	70 - 130
Ethylbenzene	ND	10	108	105	2.79	104	70 - 130	20	70 - 130
Xylenes	ND	30	108	104	3.12	119	70 - 130	20	70 - 130
%SS:	99	10	92	94	1.83	114	70 - 130	20	70 - 130

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

BATCH 63389 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1112519-001A	12/14/11 9:30 AM	12/19/11	12/19/11 8:33 PM	1112519-002A	12/14/11 9:45 AM	12/18/11	12/18/11 4:27 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.

DHS ELAP Certification 1644

QA/QC Officer