

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

**RECEIVED**

*11:29 am, May 22, 2012*

Alameda County  
Environmental Health

**Re: Former Exxon Station**

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

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



March 31, 2011

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

Re: **Semi-Annual Discharge Compliance Report – June 2010 to January 2011**  
Groundwater Remediation, 5175 Broadway, Oakland, California

Dear Ms. Mena:

Pangea Environmental Services, Inc. (Pangea) has prepared this *Semi-Annual Discharge Compliance Report – December 2010 to March 2011* for the subject site for the period of December 8, 2010 to March 31, 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 (March 31, 2011), the DPE system extracted and treated approximately 60,322 gallons of groundwater. The average groundwater flow rate has ranged from approximately 0.09 to 1.17 gpm, which includes 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](http://www.pangeaenv.com)

## SYSTEM SAMPLING

During this reporting period, samples were collected from the influent and effluent of the groundwater treatment portion of the DPE system on December 13, 2010 and February 22, 2011. Influent samples were also collected again on February 2, 2011. The system operated for approximately 87 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](mailto: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 Report

## **APPENDIX A**

### Laboratory Analytical Report

# Pangea

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

Well ID	Date	Totalizer Reading <sup>1</sup> (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
<b>System</b>	12/08/10	0	0	0	--	---	---	---	0.000	0.000	0.000	System startup testing, water not discharged to sewer yet.
<b>Influent</b>	12/10/10	248	248	2	0.09	---	---	---	0.000	0.000	0.000	
	12/14/10	1,120	872	4	0.15	<b>300</b>	<b>4.6</b>	<b>ND(&lt;5.0)</b>	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	
	01/07/11	7,622	4,037	16	0.18	---	---	---	0.010	0.000	0.000	System shutdown 1/14 due to noise complaint
	02/02/11	16,840	9,218	26	0.25	<b>1,300</b>	<b>52</b>	<b>ND(&lt;10)</b>	0.100	0.004	0.000	Off on arrival; restart.
	02/22/11	25,427	8,587	20	0.30	<b>680</b>	<b>8.4</b>	<b>ND(&lt;5.0)</b>	0.049	0.001	0.000	
	02/28/11	28,855	3,428	6	0.40	---	---	---	0.019	0.000	0.000	
	03/09/11	31,981	3,126	9	0.24	---	---	---	0.018	0.000	0.000	
	03/15/11	34,398	2,417	6	0.28	---	---	---	0.014	0.000	0.000	
	03/16/11	34,961	563	1	0.39	---	---	---	0.003	0.000	0.000	
	03/31/11	60,322	25,361	15	1.17	---	---	---	0.143	0.002	0.000	
									<b>0.221</b>	<b>0.006</b>	<b>0.000</b>	<b>Total Cumulative Removal (Lbs)</b>
<b>System</b>	12/08/10	---	---	---	---	---	---	---	---	---	---	
<b>Effluent</b>	12/14/10	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	Startup water sampling of effluent (12/14)
	02/22/11	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	

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

**ABBREVIATIONS AND NOTES:**

1 = Initial totalizer reading was 23,559. Therefore, shown reading above 0 is actual reading plus 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

Toluene, 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 Toluene, Ethylbenzene and Total Xylenes non-detect (<0.5)



**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 Heights	Date Sampled: 02/22/11
		Date Received: 02/23/11
	Client Contact: Tina De La Fuente	Date Reported: 03/01/11
	Client P.O.:	Date Completed: 02/28/11

**WorkOrder: 1102709**

March 01, 2011

Dear Tina:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **5175 Broadway, 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.



# McC Campbell Analytical, Inc.



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

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1102709

ClientCode: PEO

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

Report to: Tina De La Fuente Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 (510) 836-3700    FAX (510) 836-3709	Email: tdelafuente@pangeaenv.com cc: PO: ProjectNo: 5175 Broadway, Rockridge Heights	Bill to: Bob Clark-Riddell Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Requested TAT: <b>5 days</b>  Date Received: <b>02/23/2011</b> Date Printed: <b>02/25/2011</b>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------

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	
1102709-001	INF-W	Water	2/22/2011 15:00	<input type="checkbox"/>		A	A										
1102709-002	EFF-W	Water	2/22/2011 15:15	<input type="checkbox"/>		A											
1102709-003	INF-V	Air	2/22/2011 14:00	<input type="checkbox"/>	A												

**Test Legend:**

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

The following SampID: 003A contains 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: **2/23/2011 2:40:36 PM**

Project Name: **5175 Broadway, Rockridge Heights**

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

WorkOrder N°: **1102709** Matrix Air/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: 7°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:









**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Water/Air

QC Matrix: Water

BatchID: 56437

WorkOrder 1102709

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 1102687-001E			
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) <sup>£</sup>	ND	60	109	107	1.64	106	108	1.53	70 - 130	20	70 - 130	20
MTBE	ND	10	90	98.5	9.02	105	92.3	12.8	70 - 130	20	70 - 130	20
Benzene	ND	10	116	113	2.57	113	113	0	70 - 130	20	70 - 130	20
Toluene	ND	10	103	101	1.65	101	101	0	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	105	102	2.74	102	101	0.665	70 - 130	20	70 - 130	20
Xylenes	ND	30	118	115	2.64	115	116	0.468	70 - 130	20	70 - 130	20
%SS:	96	10	104	103	0.578	104	102	1.74	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 56437 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1102709-001A	02/22/11 3:00 PM	02/26/11	02/26/11 9:14 PM	1102709-002A	02/22/11 3:15 PM	02/26/11	02/26/11 4:14 AM
1102709-003A	02/22/11 2:00 PM	02/24/11	02/24/11 12:36 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.