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9:42 am, Oct 22, 2012

Alameda County
Environmental Health

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

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,

ENadel

Ernie Nadel
Rockridge Heights, LLC

September 30, 2012

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

Re: **Semi-Annual Discharge Compliance Report – April 2012 to September 2012**
Groundwater Remediation, 5175 Broadway, Oakland, California

Dear Ms. Mena:

Pangea Environmental Services, Inc. (Pangea) has prepared this *Semi-Annual Discharge Compliance Report – April 2012 to September 2012* for the subject site for the period of April 1, 2012 to August 31, 2012. 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 groundwater was discharged during this reporting period. 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 (August 31, 2012), the DPE system extracted and treated approximately 72,634 gallons of groundwater. The DPE system was shutdown on January 31, 2012 due to low removal rates. The average groundwater flow rate has ranged from approximately 0.01 to 0.13 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.

SYSTEM SAMPLING

During this reporting period, samples were not collected from the influent and effluent ports of the groundwater treatment system because no groundwater was discharged during this period. The system did not operate during the reporting period. System flow data and groundwater analytical results are summarized on Table 1. The DPE system was operating in compliance with discharge permit conditions as no groundwater was discharged during this period.

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 – Groundwater Extraction System Performance Summary

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 Influent	12/08/10	0	0	0	--	---	---	---	0.000	0.000	0.000	System startup testing, water not discharged to sewer yet.
	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 soundproffing 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.
	10/05/11	65,650	261	9	0.02	---	---	---	0.000	0.000	0.000	On.
	10/11/11	65,743	93	6	0.01	---	---	---	0.000	0.000	0.000	Off. Restart.
	10/18/11	65,881	138	7	0.01	---	---	---	0.000	0.000	0.000	Off. Restart.
	11/02/11	66,589	708	15	0.03	---	---	---	0.000	0.000	0.000	On.
	11/15/11	66,684	95	13	0.01	---	---	---	0.000	0.000	0.000	Off on arrival, restart.
	11/22/11	67,082	398	7	0.04	---	---	---	0.000	0.000	0.000	On.
	11/23/11	67,161	79	1	0.05	---	---	---	0.000	0.000	0.000	On.
	11/29/11	67,810	649	6	0.08	---	---	---	0.000	0.000	0.000	On.
	12/08/11	68,695	885	9	0.07	---	---	---	0.001	0.000	0.000	On.
	12/16/11	69,431	736	8	0.06	---	---	---	0.000	0.000	0.000	On.
	12/22/11	69,481	50	6	0.01	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	0.000	0.000	0.000	Off. Leave off for QM event 12/29.
	01/03/12	69,841	360	12	0.02	---	---	---	0.000	0.000	0.000	Off. Restart.
	01/04/12	70,027	186	1	0.13	---	---	---	0.000	0.000	0.000	On.
	01/16/12	71,127	1,100	12	0.06	---	---	---	0.000	0.000	0.000	On.
	01/31/12	72,634	1,507	15	0.07	---	---	---	0.000	0.000	0.000	On. System shutdown.
									0.266	**0.006**	**0.000**	**Total Cumulative Removal (Lbs)**
System Midpoint	04/12/11	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	See NOTE below.
	05/24/11	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	
	07/26/11	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	
	12/22/11	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	
System Effluent	12/08/10	---	---	---	---	---	---	---	---	---	---	
	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)**	---	---	---	
	12/22/11	---	---	---	---	**ND (<50)**	**ND (<0.5)**	**ND (<5.0)**	---	---	---	

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

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

ABBREVIATIONS AND NOTES:

NOTE = Based on previous and subsequent analytical results Pangea switched the 4/12/11 analyltical results for System Influent and Midpoint. Pangea suspects that the samples were accidently 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)