



DEPARTMENT OF THE NAVY
COMMANDER
NAVY REGION HAWAII
850 TICONDEROGA ST STE 110
JBPBH, HAWAII 96860-5101

JUN -7 2013

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June 06, 2013

CERTIFIED MAIL NO. 7011 0110 0002 1804 3463

Mr. Richard Takaba
Hawaii State Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Underground Storage Tank Section
919 Ala Moana Boulevard, Room 212
Honolulu, HI 96814

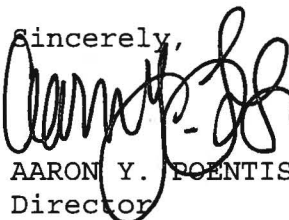
Dear Mr. Takaba:

SUBJECT: RED HILL TANK COMPLEX
MAY 2013 OIL/WATER INTERFACE MEASUREMENTS
DOH FACILITY ID NO. 9-102271
DOH RELEASE ID NO. ~~99051~~, 010011 AND 020028

990051

As recommended in the "Red Hill Bulk Fuel Storage Facility Groundwater Protection Plan" of January 2008 (revised December 2009), Environmental Science International took monthly oil/water interface measurements at groundwater monitoring wells RHMW01, RHMW02, RHMW03, and RHMW05 in May 2013. No free product was observed in the wells. A summary of the monthly oil/water interface measurements is being submitted in Enclosure 1.

If there are any questions regarding this matter, or if more information is needed, please contact Ms. Raelynn Kishaba at (808) 471-1171, extension 233.

Sincerely,


AARON Y. POENTIS
Director
Regional Environmental Department
By direction of the
Commander

Enclosure: 1. Red Hill Oil/Water Interface Measurements

Copy to: Ms. Joanna Seto, DOH Safe Drinking Water Branch

Attachment A
Red Hill Oil/Water Interface Measurements September 2007 through May 2013

Date	RHMW01			RHMW02			RHMW03			RHMW05		
	Elevation = 102.27 ft. ₁			Elevation = 104.76 ft. ₁			Elevation = 121.06 ft. ₁			Elevation = 101.55 ft. ₁		
	DTW (TOC)	SWL	LNAPL	DTW (TOC)	SWL	LNAPL	DTW (TOC)	SWL	LNAPL	DTW (TOC)	SWL	LNAPL
Sep-07	NT	NT	NT	86.80	17.96	NP	103.44	17.62	NP	~	~	~
Jan-08	84.67	17.60	<0.01	86.23	18.53	<0.01	NT	NT	NT	~	~	~
Jul-08	83.37	18.90	0	86.10	18.66	0	102.45	18.61	0	~	~	~
Oct-08	83.80	18.47	0	86.45	18.31	0	102.49	18.57	0	~	~	~
Nov-08	83.91	18.36	0	86.56	18.20	0	102.80	18.26	0	~	~	~
Jan-09	83.13	19.14	0	85.79	18.97	0	102.04	19.02	0	~	~	~
Feb-09	NT	NT	NT	86.35	18.41	0	102.56	18.50	0	~	~	~
Mar-09	83.82	18.45	0	86.44	18.32	0	102.64	18.42	0	~	~	~
May-09	83.72	18.55	0	86.37	18.39	0	102.59	18.47	0	NT	NT	NT
May-09	83.50	18.77	0	86.15	18.61	0	102.41	18.65	0	NT	NT	NT
Jul-09	83.75	18.52	0	86.42	18.34	0	102.67	18.39	0	83.09	18.46	0
Aug-09	84.04	18.23	0	86.71	18.05	0	102.84	18.22	0	83.51	18.04	0
Sep-09	84.21	18.06	0	86.84	17.92	0	103.07	17.99	0	83.61	17.94	0
Oct-09	84.24	18.03	0	86.87	17.89	0	103.07	17.99	0	83.62	17.93	0
Nov-09	83.91	18.36	0	86.56	18.20	0	102.81	18.25	0	83.25	18.30	0
Dec-09	84.12	18.15	0	86.75	18.01	0	103.00	18.06	0	83.53	18.02	0
Jan-10	84.36	17.91	0	87.00	17.76	0	103.22	17.84	0	83.75	17.80	0
Feb-10	84.24	18.03	0	86.89	17.87	0	103.14	17.92	0	83.60	17.95	0
Mar-10	84.53	17.74	0	87.15	17.61	0	103.38	17.68	0	83.96	17.59	0
Apr-10	84.75	17.52	0	87.37	17.39	0	103.60	17.46	0	84.17	17.38	0
May-10	84.80	17.47	0	87.43	17.33	0	103.66	17.40	0	84.23	17.32	0
Jun-10	84.87	17.40	0	87.51	17.25	0	103.74	17.32	0	84.30	17.25	0
Jul-10	85.03	17.24	0	87.66	17.10	0	103.89	17.17	0	84.48	17.07	0
Sep-10	85.30	16.97	0	87.92	16.84	0	104.13	16.93	0	84.71	16.84	0
Oct-10	85.29	16.98	0	87.91	16.85	0	104.13	16.93	0	84.75	16.80	0
Nov-10	85.20	17.07	0	87.84	16.92	0	104.30	16.76	0	84.60	16.95	0
Dec-10	84.87	17.40	0	87.55	17.21	0	103.98	17.08	0	84.22	17.33	0
Jan-11	85.32	16.95	0	86.91	17.85	0	103.41	17.65	0	83.65	17.90	0
Feb-11	83.82	18.45	0	86.48	18.28	0	103.02	18.04	0	83.20	18.35	0
Mar-11	83.77	18.50	0	86.39	18.37	0	102.87	18.19	0	83.20	18.35	0
Apr-11	83.54	18.73	0	86.18	18.58	0	102.39	18.67	0	82.90	18.65	0
May-11	83.39	18.88	0	86.05	18.71	0	102.69	18.37	0	82.72	18.83	0
Jun-11	83.41	18.86	0	86.11	18.65	0	102.33	18.73	0	82.81	18.74	0
Jul-11	83.57	18.70	0	86.22	18.54	0	102.44	18.62	0	82.99	18.56	0
Aug-11	83.81	18.46	0	86.42	18.34	0	102.66	18.40	0	83.21	18.34	0
Sep-11	83.81	18.46	0	86.44	18.32	0	102.69	18.37	0	83.21	18.34	0
Oct-11	83.71	18.56	0	86.38	18.38	0	102.90	18.16	0	83.15	18.40	0
Nov-11	83.60	18.67	0	86.25	18.51	0	102.47	18.59	0	83.00	18.55	0
Dec-11	83.49	18.78	0	86.10	18.66	0	102.36	18.70	0	82.85	18.70	0
Jan-12	83.57	18.70	0	86.18	18.58	0	102.56	18.50	0	82.90	18.65	0
Feb-12	83.80	18.47	0	86.41	18.35	0	102.71	18.35	0	83.20	18.35	0
Mar-12	83.41	18.86	0	86.51	18.25	0	102.45	18.61	0	82.79	18.76	0
Apr-12	83.60	18.67	0	86.34	18.42	0	102.71	18.35	0	83.17	18.38	0
May-12	84.09	18.18	0	86.71	18.05	0	102.98	18.08	0	83.53	18.02	0
Jun-12	84.34	17.93	0	86.95	17.81	0	103.17	17.89	0	83.97	17.58	0
Jul-12	84.20	18.07	0	86.64	18.12	0	102.89	18.17	0	83.41	18.14	0
Aug-12	84.19	18.08	0	86.81	17.95	0	103.30	17.76	0	83.62	17.93	0
Oct-12	84.19	18.08	0	86.81	17.95	0	103.50	17.56	0	83.72	17.83	0
Nov-12	84.23	18.04	0	86.85	17.91	0	103.10	17.96	0	83.70	17.85	0
Dec-12	84.21	18.06	0	86.87	17.89	0	103.14	17.92	0	83.70	17.85	0
Jan-13	84.05	18.22	0	86.87	17.89	0	103.14	17.92	0	83.70	17.85	0
Feb-13	84.04	18.23	0	86.62	18.14	0	102.87	18.19	0	83.43	18.12	0
Mar-13	83.82	18.45	0	86.48	18.28	0	102.75	18.31	0	83.19	18.36	0
Apr-13	83.84	18.43	0	86.50	18.26	0	102.78	18.28	0	83.41	18.14	0
May-13	84.03	18.24	0	86.69	18.07	0	102.95	18.11	0	83.41	18.14	0

Notes:
1 - Elevations were updated based on the Groundwater Flow Direction/Gradient and Tier 3 Risk Assessment Re-evaluation Letter Report, Red Hill Bulk Fuel Storage Facility, Pearl Harbor, Hawaii, Contract #N47408-04-D-8514, Task Order#4, dated April 15, 2010
Measurements recorded prior to September 2010 were collected by TEC. Measurements recorded between September 2010 through August 2012 were collected by Environet Inc. Measurements recorded after October 2012 are collected by ESI.
All units in Feet (ft.)
DTW (TOC) - depth to water from top of well casing
LNAPL - light non-aqueous phase liquid attributed to the Red Hill Bulk Fuel Storage Facility
NP - measurement not provided
NT - measurement not taken
SWL - static water level
-- - period prior to the installation of RHMW05