

Scanner



DEPARTMENT OF THE NAVY

COMMANDER
NAVY REGION HAWAII
850 TICONDEROGA ST STE 110
JBPHH, HAWAII 96860-5101

5090
Ser N45/0434
February 2, 2016

CERTIFIED NO: 7015 0640 0002 4677 5734

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
JANUARY 2016 OIL/WATER INTERFACE MEASUREMENTS
DOH FACILITY ID NO. 9-102271
DOH RELEASE ID NO. 990051, 010011, 020028, AND 140010

In response to the January 2014 release from Red Hill Tank 5, oil/water interface measurements were taken at groundwater monitoring wells RHMW01, RHMW02, RHMW03, and RHMW05 on January 20, 2016. No free product was observed in the wells.

A summary of the oil/water interface measurements from January 2014 through January 2016 is being submitted as 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, January 2014 through January 2016

Copy to: Ms. Joanna Seto, DOH Safe Drinking Water Branch
Mr. Bob Pallarino, U.S. EPA Region 9, Underground Storage
Tank Program Office
LCDR Andrew Lovgren, NAVSUP FLC Pearl Harbor
Mr. Rockne Krill, DLA Energy Pacific

Red Hill Oil/Water Interface Measurements January 2014 through January 2016

| 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 |
| 15-Jan-14 | 83.94 | 18.33 | 0 | 86.62 | 18.14 | 0 | NT | NT | NT | NT | NT | NT |
| 16-Jan-14 | NT | NT | NT | NT | NT | NT | NT | NT | NT | 83.09 | 18.46 | 0 |
| 22-Jan-14 | 83.53 | 18.74 | 0 | 86.20 | 18.56 | 0 | NT | NT | NT | 82.87 | 18.68 | 0 |
| 23-Jan-14 | 83.58 | 18.69 | 0 | 86.24 | 18.52 | 0 | NT | NT | NT | 82.94 | 18.61 | 0 |
| 24-Jan-14 | 83.57 | 18.70 | 0 | 86.23 | 18.53 | 0 | NT | NT | NT | 82.93 | 18.62 | 0 |
| 27-Jan-14 | 83.55 | 18.72 | 0 | 86.23 | 18.53 | 0 | NT | NT | NT | 82.93 | 18.62 | 0 |
| 28-Jan-14 | 83.56 | 18.71 | 0 | 86.25 | 18.51 | 0 | 102.52 | 18.54 | 0 | 82.94 | 18.61 | 0 |
| 29-Jan-14 | 83.56 | 18.71 | 0 | 86.22 | 18.54 | 0 | NT | NT | NT | 82.94 | 18.61 | 0 |
| 30-Jan-14 | 83.53 | 18.74 | 0 | 86.21 | 18.55 | 0 | NT | NT | NT | 82.93 | 18.62 | 0 |
| 31-Jan-14 | 83.53 | 18.74 | 0 | 86.19 | 18.57 | 0 | NT | NT | NT | 82.88 | 18.67 | 0 |
| 3-Feb-14 | 83.54 | 18.73 | 0 | 86.20 | 18.56 | 0 | NT | NT | NT | 82.91 | 18.64 | 0 |
| 4-Feb-14 | 83.54 | 18.73 | 0 | 86.20 | 18.56 | 0 | NT | NT | NT | 82.89 | 18.66 | 0 |
| 10-Feb-14 | 84.49 | 17.78 | 0 | 86.16 | 18.60 | 0 | 102.47 | 18.59 | 0 | 82.83 | 18.72 | 0 |
| 24-Feb-14 | 83.54 | 18.73 | 0 | 86.24 | 18.52 | 0 | 102.47 | 18.59 | 0 | 82.97 | 18.58 | 0 |
| 4-Mar-14* | NT | NT | 0 | NT | NT | 0 | NT | NT | NT | NT | NT | NT |
| 13-Mar-14* | NT | NT | 0 | NT | NT | 0 | NT | NT | NT | NT | NT | 0 |
| 28-Mar-14 | 83.76 | 18.51 | 0 | 86.42 | 18.34 | 0 | 102.65 | 18.41 | 0 | 83.18 | 18.37 | 0 |
| 7-Apr-14* | 83.42 | 18.85 | 0 | 86.43 | 18.33 | 0 | NT | NT | NT | 83.21 | 18.34 | 0 |
| 21-Apr-14 | 83.93 | 18.34 | 0 | 86.58 | 18.18 | 0 | 102.80 | 18.26 | 0 | 83.27 | 18.28 | 0 |
| 8-May-14* | 84.03 | 18.24 | 0 | 86.68 | 18.08 | 0 | NT | NT | NT | 83.46 | 18.09 | 0 |
| 22-May-14* | 83.81 | 18.46 | 0 | 86.47 | 18.29 | 0 | NT | NT | NT | 83.15 | 18.40 | 0 |
| 27-May-14 | 83.91 | 18.36 | 0 | 86.60 | 18.16 | 0 | 102.85 | 18.21 | 0 | 83.31 | 18.24 | 0 |
| 10-Jun-14* | 83.93 | 18.34 | 0 | 86.55 | 18.21 | 0 | NT | NT | NT | 83.34 | 18.21 | 0 |
| 23-Jun-14 | 84.06 | 18.21 | 0 | 86.72 | 18.04 | 0 | 103.99 | 17.07 | 0 | 83.54 | 18.01 | 0 |
| 21-Jul-14 | 84.13 | 18.14 | 0 | 86.80 | 17.96 | 0 | 102.98 | 18.08 | 0 | 83.49 | 18.06 | 0 |
| 27-Aug-14 | 84.01 | 18.26 | 0 | 86.65 | 18.11 | 0 | 102.87 | 18.19 | 0 | 83.04 | 18.51 | 0 |
| 25-Sep-14 | 84.64 | 17.63 | 0 | 87.27 | 17.49 | 0 | 103.51 | 17.55 | 0 | 84.10 | 17.45 | 0 |
| 28-Oct-14 | 83.79 | 18.48 | 0 | 86.51 | 18.25 | 0 | 102.78 | 18.28 | 0 | 83.21 | 18.34 | 0 |
| 20-Nov-14 | 83.87 | 18.40 | 0 | 86.56 | 18.20 | 0 | 102.78 | 18.28 | 0 | 83.35 | 18.20 | 0 |
| 23-Dec-14 | 83.67 | 18.60 | 0 | 86.37 | 18.39 | 0 | 102.64 | 18.42 | 0 | 83.05 | 18.50 | 0 |
| 28-Jan-15 | 83.63 | 18.64 | 0 | 86.35 | 18.41 | 0 | 102.63 | 18.43 | 0 | 83.03 | 18.52 | 0 |
| 27-Feb-15 | 83.68 | 18.59 | 0 | 86.28 | 18.48 | 0 | 102.52 | 18.54 | 0 | 83.06 | 18.49 | 0 |
| 26-Mar-15 | 83.83 | 18.44 | 0 | 86.04 | 18.72 | 0 | 102.79 | 18.27 | 0 | 83.24 | 18.31 | 0 |
| 21-Apr-15 | 84.33 | 17.94 | 0 | 86.97 | 17.79 | 0 | 103.18 | 17.88 | 0 | 83.72 | 17.83 | 0 |
| 28-May-15 | 84.29 | 17.98 | 0 | 86.97 | 17.79 | 0 | 103.24 | 17.82 | 0 | 83.95 | 17.60 | 0 |
| 25-Jun-15 | 84.58 | 17.69 | 0 | 87.28 | 17.48 | 0 | 103.57 | 17.49 | 0 | 83.75 | 17.80 | 0 |
| 21-Jul-15 | 84.58 | 17.69 | 0 | 87.24 | 17.52 | 0 | 103.44 | 17.62 | 0 | 83.76 | 17.79 | 0 |
| 27-Aug-15 | 84.44 | 17.83 | 0 | 87.13 | 17.63 | 0 | 103.41 | 17.65 | 0 | 83.69 | 17.86 | 0 |
| 23-Sep-15 | 84.26 | 18.01 | 0 | 86.91 | 17.85 | 0 | 103.21 | 17.85 | 0 | 83.63 | 17.92 | 0 |
| 20-Oct-15 | 84.00 | 18.27 | 0 | 86.38 | 18.38 | 0 | 103.38 | 17.68 | 0 | Obstructed | NT | 0 |
| 18-Nov-15 | 84.25 | 18.02 | 0 | 86.93 | 17.83 | 0 | 103.24 | 17.82 | 0 | 84.62 ² | 16.93 | 0 |
| 17-Dec-15 | 83.76 | 18.51 | 0 | 86.36 | 18.40 | 0 | 102.56 | 18.50 | 0 | 83.18 | 18.37 | 0 |
| 20-Jan-16 | 83.31 | 18.96 | 0 | 85.97 | 18.79 | 0 | 102.21 | 18.85 | 0 | Obstructed | NT | 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 No. N47408-04-D-8514, Task Order 54, dated April 15, 2010.

2 - Dedicated groundwater pump was obstructing the path of the interface meter probe. Depth measured was based on the elevation of water when pump was removed from RHMW05.

Measurements recorded by Environmental Science International from January 2014 to August 2015, unless otherwise noted.

Measurements recorded by Element Environmental, LLC from September 2015.

* - Measurements recorded by NAVFAC HI.

All units in feet (ft).

DTW (TOC) - depth to water from top of well casing

LNAPL - light non-aqueous phase liquid

NT - measurement not taken

SWL - static water level