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CITY AND COUNTY OF HONOLULU
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March 23, 2018

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Mr. Omer Shalev
EPA Red Hill Project Coordinator
United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

and

Ms. Roxanne Kwan
Solid and Hazardous Waste Branch
State of Hawaii
Department of Health
2827 Waimano Home Road
Pearl City, Hawaii 96782

Dear Mr. Shalev and Ms. Kwan:

Subject: Comments on the Michael Baker International's Report: Test Plan for Evaluating Leak Detection Methods at the Red Hill Bulk Fuel Storage Facility (RHBFSF), Joint Base Pearl Harbor-Hickam, Oahu, Hawaii in support of Administrative Order on Consent_(AOC) Statement of Work (SOW) Sections 4.5: New Release Detection Alternatives and 4.6: New Release Detection Alternatives Report

The Honolulu Board of Water Supply (BWS) has reviewed the Test Plan for Evaluating Leak Detection Methods at the RHBFSF dated November 2, 2017 (Baker, 2017). The BWS is encouraged to see that the plan incorporates most, if not all, of our suggestions from our prior letters (Lau, 2015a; Lau, 2015b; Lau, 2015c; Lau, 2016; Lau, 2017).

We understand from Mr. Steve Linder at the United States Environmental Protection Agency (EPA) that this testing is currently being implemented and performed at the RHBFSF on one of the tanks to simultaneously evaluate three different leak detection methods from three different vendors of leak detection equipment. Presumably, the current leak detection methodology will also be evaluated along with the three new methodologies. The BWS would like to review the results from this testing once they are available.

Mr. Shalev and Ms. Kwan
March 23, 2018
Page 2

Regarding the analysis of test data, we believe the regression approach described in the test plan as a supplemental calculation is sound and potentially useful. However, we suggest expansion of the regression model to include a cross-product term for the interaction of slope and product level. Addition of this term will enable the analyst to assess whether the proportionate bias, if any, in leak detection (as well as the constant bias, if any,) varies according to the level of product in the tank.

We want to point out that the AOC Section 8 quantitative risk and vulnerability analysis (QRVA) should be conducted with the leak detection methodology that has been in use to the present, but which is presumably not nearly as good as the methods currently being evaluated. This means that the new minimum leak detection probabilities for the methods currently being evaluated should not be used in the QRVA. In addition, it will be important to include in the test report and to incorporate in the QRVA the time allotted for product settling, since the minimum leak rate cannot be detected until this time has elapsed.

If you have any questions, please feel free to contact Erwin Kawata, Program Administrator of the Water Quality Division at 808-748-5061.

Very truly yours,



ERNEST V.W. LAU, P.E.
Manager and Chief Engineer

cc: Mr. Steve Linder
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Mr. Mark Manfredi
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References

- Michael Baker International (Baker). 2017. Test plan for evaluating leak detection methods at the Red Hill fuel storage complex, Michael Baker International, Joint Base Pearl Harbor Hickam, Hawaii, November 2, 2017.
- Lau, 2015a. Honolulu Board of Water Supply (BWS) Comments on the Proposed Administrative Order on Consent (AOC) and Attachment A, Statement of Work (SOW) on the Red Hill Bulk Fuel Storage Facility. July 20.
- Lau, 2015b. Honolulu Board of Water Supply (BWS) Letter Regarding September 15, 2015 Tour of the Navy Red Hill Bulk Fuel Facility. September 18.
- Lau, 2015c. Honolulu Board of Water Supply (BWS) Recommendations to Consider in the Development of the Red Hill Administrative Order on Consent (AOC) Work Plans. December 3.
- Lau, 2016. Honolulu Board of Water Supply (BWS) Recommendations for Inclusion into the Red Hill Bulk Storage Fuel Facility Administrative Order on Consent (AOC) Work Plans. April 3.
- Lau, 2017. Honolulu Board of Water Supply (BWS) Comments to the Red Hill Administrative Order on Consent (AOC) Section 4.5 New Release Detection Alternatives [Report] Scope of Work, dated June 19, 2017. July 14.