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October 16, 2017

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

and

Mr. Steven Chang, P.E.
DOH Red Hill Project Coordinator
State of Hawaii
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Dear Messrs. Pallarino and Chang:

Subject: EPA Letter Regarding: Revision to Conditional Approval of Scope of Work for Destructive Testing Dated May 30, 2017 Submitted to the Regulatory Agencies Pursuant to Section 5.3.2 of the Red Hill Administrative Order on Consent

The Honolulu Board of Water Supply (BWS) has reviewed the subject document and offers the following comments. BWS has previously provided numerous comments regarding the Destructive Testing process at the Red Hill Bulk Fuel Storage Facility (RHBFSF) and we refer the AOC parties to our previous comment letters (Lau 2017a, Lau 2017b, and Lau 2017c). In this letter we reiterate some of our previous comments as well as provide specific comments on the above subject letter dated August 10, 2017 to Mr. Mark Manfredi, Red Hill Regional Program Director/Project Coordinator, Naval Facilities, Hawaii.

In the above subject letter, the United States Environmental Protection Agency (EPA) and the Hawaii Department of Health (DOH) modified "Condition 1" of their conditional approval letter for Destructive Testing (AOC Section 5.3.2). In the initial conditional approval letter, the EPA and DOH stated:

> " ...This plan should include the probability of detection ("POD") data for the tools to be used for the NDE." (Pallarino and Chang, 2017a).

The current letter changes Condition 1 to read as follows:

> "This plan should include validating the NDE measures to be used for each damage mechanism of concern (i.e. cracks, pits, general thinning, etc.). Validation in this context means establishing that the contractor performing the work for the Navy will describe and explain the basis for equipment and techniques used. **Any claims of achievable performance should be supported with past performance evidence or references as well as its expected performance criteria.** The contractor performing the work shall also include professional codes, standards and/or procedures that are employed, **and describe any equipment calibrations and/or testing performed to confirm claimed performance, such as past performance demonstration projects or, if available, documented probabilities of detection.** The contractor shall specify personnel qualifications, and any conditions employed to control and audit the specific individual's performance while the work is being performed (Pallarino and Chang, 2017b). **[Emphasis added]**

BWS strongly supports much of the new language added to Condition 1 requiring the Navy and its contractors to provide a plan validating the non-destructive examination (NDE) measures for each damage mechanism (cracks, pits, general thinning, etc.), personnel qualifications, and conditions to control and audit individual's performance.

However, as we have previously stated, since NDE accuracy and reliability is so important for the future "leak free" operation between the rather long re-inspection intervals, BWS believes that probability of detection (POD) needs to be established and taken into account whenever the reliability of the testing is assessed or reported. In addition, BWS is concerned whether "past performance evidence or references" would be applicable to the unique conditions at the RHBFSF. The accuracy and reliability of NDE is of paramount importance – missing a single flaw of critical, or misclassifying a flaw that requires repair, may lead to leak(s) initiating before the next re-inspection of a given tank or tanks.

Thank you for the opportunity to comment. If you have any questions, please feel free to call Erwin Kawata, Program Administrator of our Water Quality Division at 808-748-5080.

Very truly yours,

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

cc: Mr. Steve Linder
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Mr. Mark Manfredi
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References Cited

Lau, E. Y. W. (2017a). Letter to Mr. Bob Pallarino, United States Environmental Protection Agency (EPA) and Mr. Steven Y.K. Chang, State of Hawaii, Department of Health (DOH) on July 14, 2017, regarding: Board of Water Supply (BWS) Comments to the Conditional Approval of Scope of Work for Destructive Testing Dated May 30, 2017 submitted to the Regulatory Agencies Pursuant to Section 5.3.2 of the Red Hill Administrative Order on Consent (AOC), dated July 7, 2017.

Lau, E. Y. W. (2017b). Letter to Mr. Bob Pallarino, United States Environmental Protection Agency (EPA) and Mr. Steven Y.K. Chang, State of Hawaii, Department of Health (DOH) on March 9, 2017, regarding: Board of Water Supply (BWS) Comments Pertaining to the Environmental Protection Agency (EPA) and Hawaii Department of Health (DOH) February 15, 2017 Administrative Order on Consent (AOC) Sections 2, 3, 4, 5 and 8 Meeting.

Lau, E. Y. W. (2017c). Letter to Mr. Bob Pallarino, United States Environmental Protection Agency (EPA) and Mr. Steven Y.K. Chang, State of Hawaii, Department of Health (DOH) on February 13, 2017, regarding: Board of Water Supply (BWS)

Comments to the Work Plan Being Developed Under the Red Hill Bulk Fuel Storage Facility Administrative Order on Consent (AOC) Statement of Work (SOW) Section 5.3.

Pallarino, B., and Chang, S. (2017a). Letter to Mr. Mark Manfredi, Naval Facilities Hawaii, on July 7, 2017, regarding: Conditional Approval of Scope of Work for Destructive Testing Dated May 30, 2017 submitted to the Regulatory Agencies Pursuant to Section 5.3.2 of the Red Hill Administrative Order on Consent.
Pallarino, B., and Chang, S. (2017b). Letter to Mr. Mark Manfredi, Naval Facilities Hawaii, on August 10, 2017, regarding: Revision to Conditional Approval of Scope of Work for Destructive Testing Dated May 30, 2017 submitted to the Regulatory Agencies Pursuant to Section 5.3.2 of the Red Hill Administrative Order on Consent.