



UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

MAY 21 2018

Mark Manfredi
Red Hill Regional Program Director
850 Ticonderoga Street, Suite 110
Joint Base Pearl Harbor Hickam, Hawaii 96860-5101

**Re: Approval of Red Hill Administrative Order on Consent ("AOC")
Statement of Work ("SOW") Section 3 - Tank Upgrade Alternatives**

Dear Mr. Manfredi:

The U.S. Environmental Protection Agency ("EPA") and the Hawaii Department of Health ("DOH"), collectively the "Regulatory Agencies", have reviewed the *Tank Upgrade Alternatives Report* ("Report") submitted by the U.S. Department of the Navy ("Navy") and Defense Logistics Agency ("DLA") on December 8, 2017. The Regulatory Agencies have determined that the Report satisfies the requirements of Section 3.3 of the Red Hill AOC SOW. The Report, prepared by Navy and DLA expert engineering contractors, identifies and evaluates tank upgrade alternatives ("TUA") that can be applied to the tanks at the Red Hill Bulk Fuel Storage Facility ("Facility"). Pursuant to 7(b) of the Red Hill AOC, the Regulatory Agencies approve the Report.

The Report documents dozens of technologies that may be applied to the tanks at the Facility, and it details various aspects of the alternatives that were proposed in the Report's Scope of Work. The Navy and DLA and the Regulatory Agencies agreed during scoping meetings that the following six alternatives were likely feasible and merited detailed examination:

- 1) maintaining the current tank system with substantial improvements to tank operations and maintenance procedures;
- 2) option 1) with an additional full internal coating of the tank vessel's steel liner;
- 3) option 1) with a new internal steel liner and full internal coating;
- 4) a composite double-wall carbon steel tank retrofit;
- 5) a composite double-wall carbon steel and stainless-steel tank retrofit; and
- 6) a storage vessel constructed within each existing tank.

The Report includes conceptual designs and construction considerations, and characterizes important attributes for each of these six options now under evaluation. Although the Regulatory Agencies are approving the Report, it is important to recognize that the evaluation conducted by the Navy and DLA in the Report may be subject to various technical interpretations and conclusions. The Regulatory Agencies will make their own technical interpretations and conclusion based on its review of the Report and other

data gathered to date regarding Red Hill, our independent expert analysis, and the TUA decision process.

With this approval, the Regulatory Agencies look forward to a constructive TUA decision-making process. The Navy and DLA should prepare for the upcoming decision meetings by assembling the information requested in our March 7, 2018 letter to Admiral B.P. Fort. As detailed in that letter, the Regulatory Agencies anticipate that the Navy and DLA will present information that compares the relative environmental performance of each potential tank system. Based on Admiral Fort's May 4, 2018 response, we anticipate that the Navy and DLA are gathering this information and completing work from other portions of the Red Hill AOC SOW and expect to be well positioned to proceed towards developing a proposed tank upgrade decision for EPA and DOH review. We are also aware that the Navy and DLA are revising the alternative sites location study to include additional information and analysis on relocating the fuel currently being stored at the Facility. We look forward to reviewing this critical information to yield productive TUA Decision Meetings in the coming months, seek public and stakeholder input and hold a public meeting.

We know that the Navy and DLA share the Regulatory Agencies' goal of zero future fuel releases from the Facility. These next steps in the TUA decision-making process are critical to upgrading the tanks at the Facility and achieving this goal. We look forward to our meetings in the coming months. Please let us know if you have any comments or concerns.

Sincerely,



Omer Shalev
Red Hill Project Coordinator
EPA Region 9



Roxanne Kwan
Red Hill Project Coordinator
State of Hawaii, Department of Health

Enclosures: 1. EPA and DOH Letter to Navy dated March 7, 2018
2. Navy letter to EPA and DOH dated May 4, 2018

cc: Admiral Brian P. Fort, Navy (via email)
Captain Richard D. Hayes III, Navy (via email)

Enclosure 1. EPA and DOH Letter to Navy dated March 7, 2018



UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105



STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

MAR - 7 2018

Admiral Brian P. Fort
Commander, Navy Region Hawaii
850 Ticonderoga Street, Suite 310
Joint Base Pearl Harbor Hickam, Hawaii 96860-5101

**Re: Red Hill Administrative Order on Consent ("AOC") Statement of Work ("SOW")
Section 3 - Tank Upgrade Alternatives**

Dear Admiral Fort:

The U.S. Environmental Protection Agency ("EPA") and the Hawaii Department of Health ("DOH") recognize the U.S. Department of the Navy ("Navy") and Defense Logistics Agency's ("DLA's") continued efforts to implement improvements to the Red Hill Bulk Fuel Storage Facility's infrastructure and operations that will reduce the potential for future fuel releases. Section 3 of the Red Hill AOC Statement of Work requires the Navy and DLA to identify the best available practicable technology ("BAPT") that can be applied to all in-service tanks and submit their proposal to the EPA and DOH ("Regulatory Agencies") for review and approval. The Regulatory Agencies acknowledge that this proposal to upgrade the tanks is a challenging, multi-faceted decision, therefore we are clarifying our expectations of the Navy and DLA's proposal so that it may obtain Regulatory Agency approval.

Please note that this letter is being provided before the pending judicial order upon DOH. The Navy and DLA shall ensure that the BAPT identified in their tank upgrade proposal meets all applicable federal and state laws and regulations.

The BAPT identified by the Navy and DLA must demonstrate to EPA and DOH's satisfaction that groundwater and drinking water resources will be protected. Presently, the Navy and DLA are evaluating six general alternatives as candidates for BAPT. These candidates include three single wall options, three double wall retrofits, along with several improvements to facility's operational practices and contingency measures. In addition, the Navy and DLA are studying the feasibility and benefits of storing the fuel at Red Hill at alternative locations. The Regulatory Agencies understand that the cost, uncertainty, and level of effort required to implement these options vary dramatically. The Tank Upgrade Alternatives ("TUA") Decision Document must include ample justification supporting the Navy and DLA's tank upgrade proposal.

Based on our review of documents and information provided to date, the Regulatory Agencies have concerns regarding how the Navy and DLA plan to compare the relative environmental performance of each TUA. The evaluation of environmental performance of each TUA should not only include the

design of the tank vessel, but also other aspects of the various fuel management systems. For example, the identification of BAPT should describe aspects of the tank system, including, but not limited to:

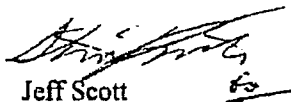
- physical description of the tank vessel,
- leak detection,
- leak response procedures, including contingency measures,
- Red Hill tank maintenance procedures, including the integrity of nondestructive examination,
- pipeline integrity; and
- performance of the lower tunnel to contain fuel.

The Navy and DLA's TUA Decision Document and their identification of BAPT should consider these aspects of the tank system and a conservative conceptual site model to adequately compare the environmental performance of different TUAs. The reported 2014 release from tank 5 and some documented historical releases from the facility can be attributed to specific modes of tank operation, such as recommissioning. Therefore, the Navy and DLA should also compare a TUA's environmental performance during all modes of operation, (i.e. during recommissioning, static storage, transient storage) and from different release initiating events (with attention paid to cracks and/or corrosion in the steel liner, and catastrophic hazards, such as major earth movement, explosion, fire, flood).

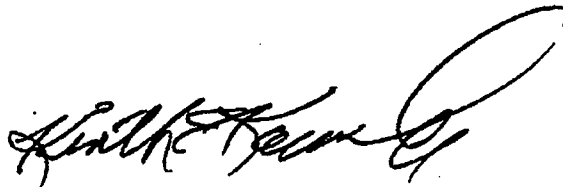
The Regulatory Agencies have reviewed the Navy and DLA's TUA Decision Process Document. It primarily describes the information that the Navy and DLA plan to use, and the teams and organizations within the U.S. Department of Defense that will develop the proposed decision. The Navy and DLA's decision process should describe its approach to balancing factors such as operational performance, environmental performance, and cost in the process of developing a proposed decision. Additionally, the Navy and DLA should address how uncertainty will be addressed in the decision process. The Navy and DLA should revise their Decision Process Document based on this letter, our previous discussions, and input received from stakeholders prior to the initial TUA Decision Meeting.

Along with Navy and DLA, the Regulatory Agencies seek zero future fuel releases from the facility. To help achieve this goal, the Regulatory Agencies look forward to the next steps in the process to upgrading the tanks at the facility. The Regulatory Agencies are finishing our review of the TUA Report, and we currently anticipate approval of the TUA Report in the coming weeks. Once approved, Navy and DLA will have 60 days to provide a revised TUA Decision Process Document and commence the initial TUA Decision Meeting. Please contact us if you would like to discuss the issues identified in this letter.

Sincerely,



Jeff Scott
Director
Land Division



Keith Kawaoka
Deputy Director
State of Hawaii, Department of Health

cc: Captain Richard D. Hayes III, Navy (via email)
Mark Manfredi, Navy (via email)

Enclosure 2: Navy letter to EPA and DOH dated May 4, 2018



DEPARTMENT OF THE NAVY

COMMANDER
NAVY REGION HAWAII
850 TICONDEROGA ST STE 110
JBP HH HI 96860-5101

May 4, 2018

CERTIFIED NO:

Mr. Jeff Scott
Director Land Division
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105

CERTIFIED NO:

Mr. Keith Kawaoka
Deputy Director for Environmental Health
State of Hawaii Department of Health
1250 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Scott and Mr. Kawaoka:

SUBJECT: ADMINISTRATIVE ORDER ON CONSENT STATEMENT OF
WORKSECTION 3 – TANK UPGRADE ALTERNATIVES, RED HILL BULK
FUEL STORAGE FACILITY, JOINT BASE PEARL HARBOR-HICKAM, OAHU,
HAWAII

Thank you for your letter of March 7, 2018. The Navy and Defense Logistics Agency (DLA) acknowledge the concerns you expressed and feel we are prepared to move forward in the Tank Upgrade Alternative (TUA) decision process. Navy and DLA consider the TUA Report of December 8, 2017 complete in its current form. We have carefully considered your concerns, together with all the work we have accomplished to date in support of the Administrative Order on Consent (AOC), as well as the remaining work currently being planned and in execution at Red Hill.

The Navy and DLA feel confident we can fully demonstrate to the Environmental Protection Agency (EPA) and Department of Health's (DOH) satisfaction that the ground and drinking water resources in the vicinity of Red Hill will be protected with the best available practicable technology being reviewed within Navy/DLA channels. We have been responsibly evaluating the options discussed in our TUA Report of December 8, 2017 as well as the concept presented in our Alternate Location Study of February 5, 2018. With the additional work coming due this July in support of AOC/SOW sections 4, 5, 6, and 7 along with a supplemental report to the Alternate Location Study, we are confident we will have enough information available to inform the TUA decision process in the timeframe currently established. We enthusiastically anticipate EPA and DOH's response to our TUA Report which will initiate the final phases of the TUA selection process.

My Red Hill staff and I look forward to working with you and your staffs in the coming weeks in what will ultimately be a historical decision for a project which will serve well both the people of Hawaii and our nation's defense for many years to come.

A handwritten signature in black ink, appearing to read "B. P. Fort", is written over a horizontal line.

B. P. FORT