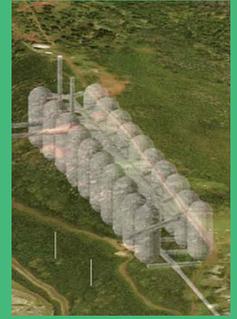


## Status Update:

# Red Hill Underground Fuel Storage Facility

Implementation of the Administrative Order on Consent Agreement (AOC) between the Navy and Defense Logistics Agency, the Hawaii Department of Health, and the U.S. EPA for Environmental Investigation, Cleanup and Environmental Performance



Issue #4 – August 2018

## HIGHLIGHTS

- Tank Upgrade Selection Process Progresses
- Regulators Tentatively Plan to Hold Tank Upgrade Public Meeting and Workshop in Winter 2018-2019
- Drinking Water Continues to Meet Federal and State Standards
- Navy Completes Onsite Tests to Evaluate Release Detection Methods
- Navy Implements Extensive Process to Validate Current Scanning Technologies
- Navy Continues to Study Environmental Conditions Around Facility
- Navy Completing Revised Alternative Sites Study
- Hawaii Department of Health Revises Underground Storage Tank Rules

## Process for Selecting Red Hill Tank Upgrades Progresses

On May 21, 2018, the Hawaii Department of Health and U.S. EPA approved the Navy's *Tank Upgrade Alternatives Report*. The report evaluated dozens of technologies that may be applied to the tanks and eventually analyzed six tank upgrade options in depth. Three of the six options utilize a single-walled tank system and three utilize double-walled systems. The Navy's tank upgrade study does not recommend a specific upgrade option. Instead, it provides conceptual design information regarding six tank upgrade alternatives. This information will be used in conjunction with work from other portions of the Red Hill Administrative Order on Consent and input from the community to ultimately inform the Navy, Hawaii Department of Health and U.S. EPA's determination of how to best upgrade the existing Red Hill tanks. Any proposed tank upgrades would proceed while the overall facility remains in operation.

The graphic below shows how public input will be sequenced and incorporated into a tank upgrade decision. A public information workshop was held on March 14, 2018 to explain the content of the studies and hear the community's concerns. Currently, technical meetings are underway to discuss the tank upgrade options, and the Navy will present their proposal to upgrade the tanks after the technical meetings have concluded. Hawaii Department of Health and U.S. EPA will hold a public information workshop and meeting to receive input from the community about the Navy's proposed upgrade decision before deciding to approve or disapprove the Navy's proposal.

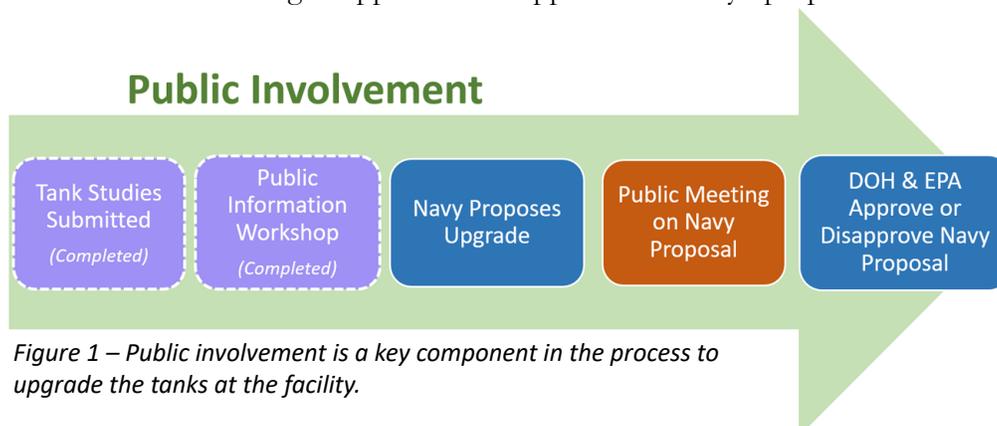
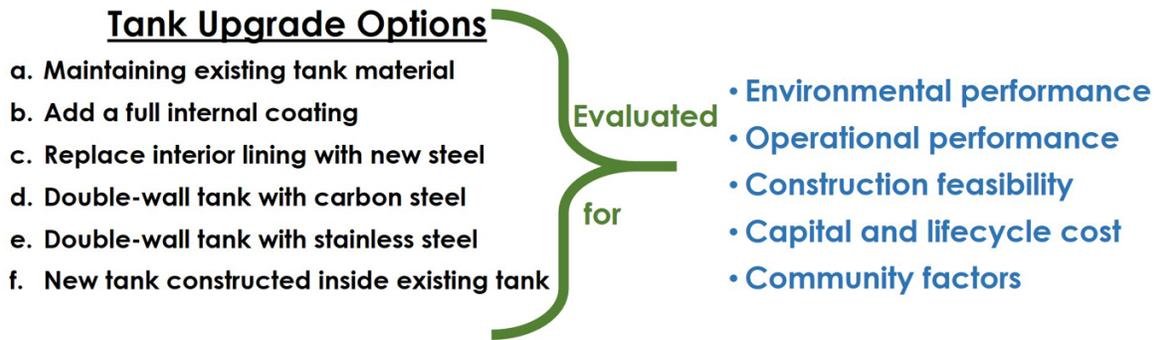


Figure 1 – Public involvement is a key component in the process to upgrade the tanks at the facility.

A decision on how to best upgrade the tanks at Red Hill will be revisited once every five years. For this first tank upgrade decision, six tank upgrade options are being closely evaluated.



More information on the tank upgrade decision process is available on the Tank Upgrade Alternatives page of EPA's Red Hill website, at [www.epa.gov/red-hill](http://www.epa.gov/red-hill).

### **Regulators to Hold Public Meeting and Workshop on Tank Upgrades in Winter 2018-2019**

The Hawaii Department of Health and U.S. EPA will host a public meeting and workshop in late 2018 or early 2019 in Honolulu to receive public comments on the Navy's proposal to upgrade the tanks at Red Hill. Immediately before the public meeting, Hawaii Department of Health, U.S. EPA and the Navy will hold an information workshop to answer questions from the community in a one-on-one setting. A public notice will be distributed at least 14 days prior to the meeting, announcing the date and location of the public meeting and workshop. The Navy must revisit their proposal to upgrade the tanks at Red Hill once every five years.

### **Drinking Water Continues to Meet Federal and State Standards**

The Joint Base Pearl Harbor-Hickam System continues to be in compliance with federal and state drinking water standards, and the public water supply is safe. Depending on your location, drinking water in the Red Hill region is either supplied by the Honolulu Board of Water Supply, or Joint Base Pearl Harbor-Hickam Water System. Full drinking water reports are available on your local water purveyor's website.

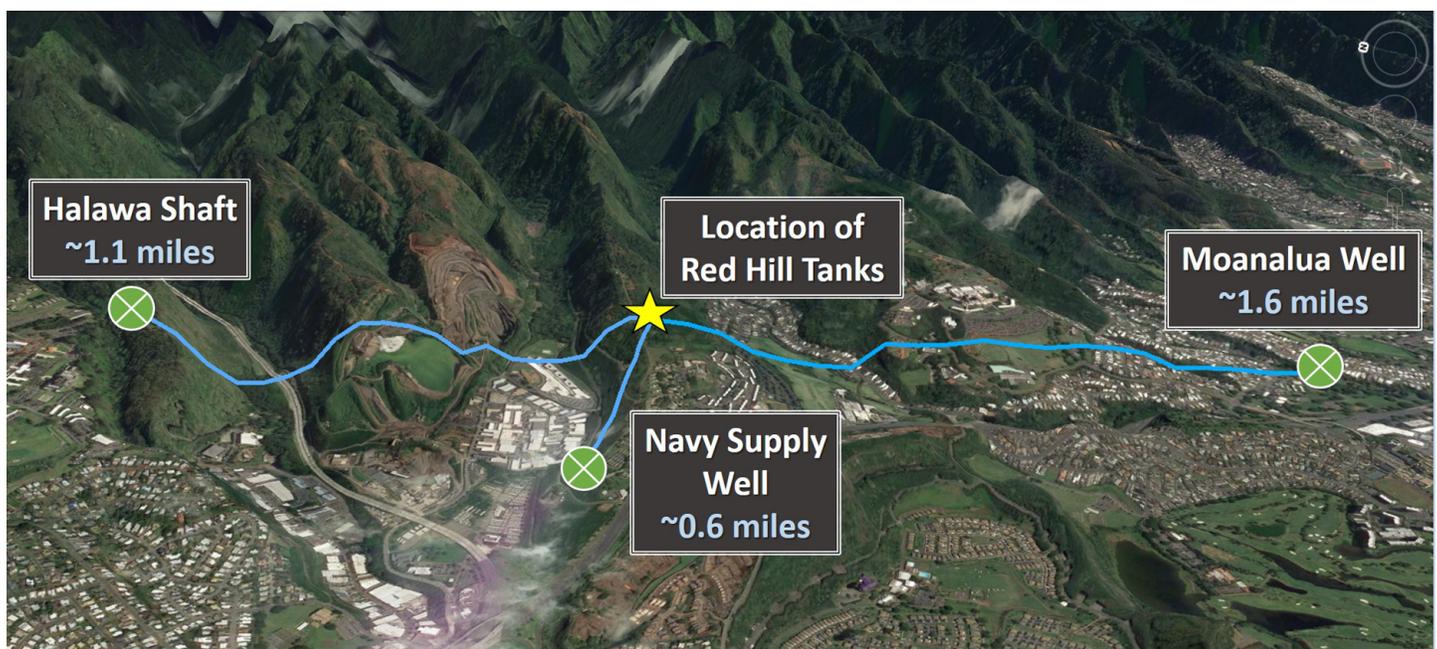


Figure 2 – Red Hill tanks and associated drinking water supply well locations

## The Red Hill Fuel Tanks

The Navy's Red Hill Bulk Fuel Storage Facility, located near Pearl Harbor, provides fuel for military operations in the Pacific. First constructed in the 1940s, the unique facility includes 20 large underground storage tanks with a facility-wide capacity of approximately 250 million gallons of fuel. A fuel release of roughly 27,000 gallons in January 2014 led to a comprehensive plan to minimize the threat of future leaks and protect groundwater resources around the facility.

### Navy Completes Onsite Tests to Evaluate Release Detection Methods

On July 26, 2018 the Navy submitted a *New Release Detection Alternatives Report* to the Hawaii Department of Health and U.S. EPA for review and approval. The report details two months of advanced onsite tests that the Navy and its contractors conducted at Red Hill earlier this year to determine whether the Navy can improve its ability to detect small leaks from the tanks. The report also details the Navy's release response procedures if a leak were to occur. The report can be found online at [www.epa.gov/red-hill/release-detection-red-hill](http://www.epa.gov/red-hill/release-detection-red-hill).

### Navy Implements Extensive Process to Validate Current Scanning Technologies



Figure 3 – Images from the tank inspection process

From June 18 to 23 the Navy removed small portions of steel liner in one of the tanks at Red Hill to test the accuracy and precision of its current scanning methods to detect flaws inside the tank. The tank's steel and concrete were also visually inspected and laboratory tested to understand current physical and chemical properties and to gain a better understanding of any corrosion factors that may be at work. Prior to the removal work, Hawaii Department of Health and U.S. EPA reviewed the Navy's testing plans with the assistance of a local corrosion expert and a petroleum industry expert. The Navy's observations and the laboratory findings will be submitted to the Hawaii Department of Health and U.S. EPA in a final report for review and approval in September 2018.

### Navy Continues to Study Environmental Conditions Around Facility

As the Navy proceeds to install additional groundwater monitoring wells, it has also initiated several other methods of environmental investigation to help understand the relationship between groundwater and the geology near the facility. These methods include using surface penetrating tools to investigate shallow subsurface features, completion of a high-resolution monitoring well survey with the United States Geological Survey, and groundwater modeling to determine possible flow paths of groundwater through the subsurface. These new investigations will yield information to help develop an overall understanding of the subsurface and the ways in which groundwater behaves under various conditions.

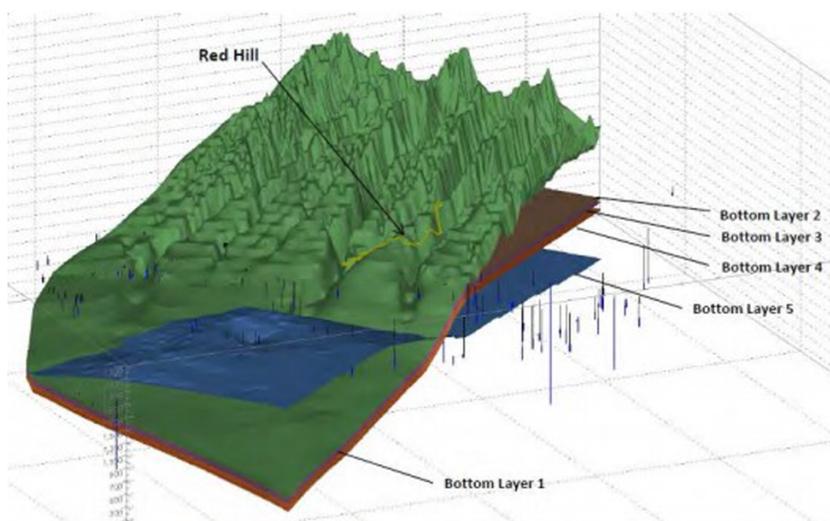


Figure 4 – Mapping features in the Red Hill subsurface

## Navy Completing Revised Alternative Sites Study



Figure 5 – A potential alternative site for the Red Hill Bulk Fuel Storage Facility

As part of the work under the Red Hill Administrative Order on Consent, the Navy and Defense Logistics Agency studied the viability of relocating the fuel currently stored at the facility to alternative sites. The Navy and Defense Logistics Agency submitted a study to the Hawaii Department of Health and U.S. EPA on March 6, 2018. The Navy plans to revise the alternative sites study to incorporate lifecycle cost assessments of relocating the fuel and to include other features that may affect facility cost and design. This revised report is expected to be completed by August 31, 2018.

### Hawaii Department of Health Updated Underground Storage Tank Rules

In response to the October 2015 update of the federal underground storage tank regulations, the Hawaii Department of Health updated its underground storage tank regulations. The updated rules went into effect on July 15, 2018. Some of the requirements from these updated regulations will apply to the Red Hill Facility. The Hawaii Department of Health's underground storage tank regulations can be found at [health.hawaii.gov/shwb/files/2018/04/11-280.1-HAR-proposed-April-23.pdf](https://health.hawaii.gov/shwb/files/2018/04/11-280.1-HAR-proposed-April-23.pdf).

### Information Available on EPA's Website for Review and Comment

Navy reports and additional information developed under the Red Hill AOC are available on U.S. EPA's and Hawaii Department of Health's websites (see next page). Interested members of the public are encouraged to review these documents and provide any comments or feedback to the contacts listed on the next page or via email to [redhill@epa.gov](mailto:redhill@epa.gov).

## For Further Information:

EPA Red Hill Website:  
[www.epa.gov/red-hill](http://www.epa.gov/red-hill)

HDOH Red Hill Website  
[health.hawaii.gov/shwb/ust-red-hill-project-main](http://health.hawaii.gov/shwb/ust-red-hill-project-main)

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