

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 #2 – May 2017

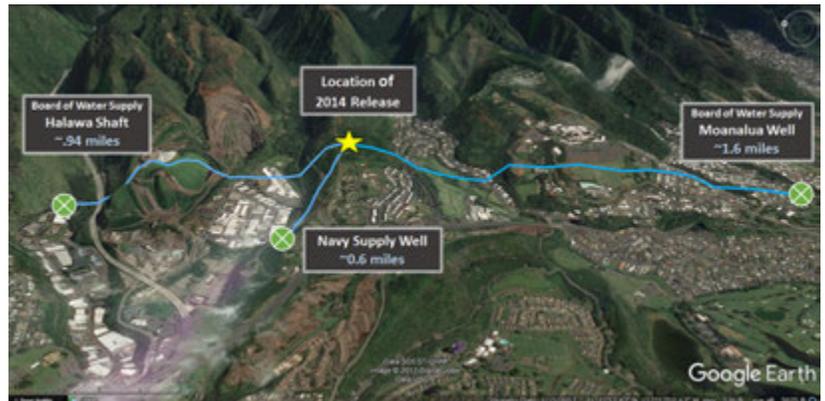
HIGHLIGHTS

- **Drinking water continues to meet federal and state standards**
- **Groundwater monitoring expansion underway**
- **Recent testing indicates tanks are not leaking**
- **Navy improves inspection and repair procedures**
- **In-depth tank upgrade study underway**
- **Public meeting scheduled for June 22 at Moanalua Middle School**

DRINKING WATER

Drinking Water Sampling Continues to Meet Federal and State Standards

Drinking water supplies in the vicinity of the Red Hill region continue to meet all federal drinking water standards. 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. The most recent drinking water testing indicates that the public drinking water supply is safe.



GROUNDWATER INVESTIGATION

Groundwater Monitoring Expanded

On August 10, 2016, EPA and DOH approved the Navy's Monitoring Well Installation Work Plan, and the Navy began drilling operations to install new wells in late August 2016. The Monitoring Well Installation Work Plan and the approval letter from EPA and DOH can be found at www.epa.gov/red-hill/groundwater-monitoring. A new monitoring well located southeast of the spill location was installed in April 2017. Access agreements for another monitoring well north west of the spill location are in progress. EPA, DOH and the Navy are committed to expanding the network of groundwater monitoring to ensure the protection of drinking water through accurate characterization of the underlying geology.

The Navy continues to test groundwater under and adjacent to the facility. Groundwater samples are collected from their entire network at least quarterly. Monitoring Well #2, which is located adjacent to the January 2014 fuel release from Tank 5, continues to show the highest levels of groundwater contamination. Cumulative data from all of the Navy's monitoring wells are available at health.hawaii.gov/shwb/ust-red-hill-project-main/.

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.



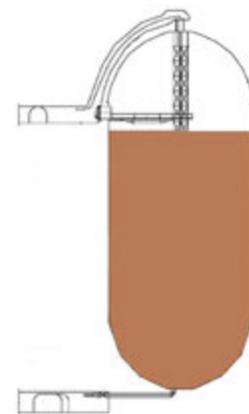
FACILITY INFRASTRUCTURE

Testing Indicates Tanks Are Not Leaking

From December 2016 to February 2017, the Navy performed annual integrity tests on all of the tanks currently in use. Test results reported to EPA and DOH indicate that all tanks were tight and not leaking. The EPA and DOH will review the complete comprehensive reports, which will be forthcoming in the third quarter of 2017.

Regulatory Agencies and Industry Experts Conduct Facility Evaluation

In May 2016, EPA and DOH officials performed a thorough evaluation of the Red Hill facility and its operating records with a contracted team of industry experts. The team concluded that the facility's operations and maintenance meet or exceed practices encountered in private industry. The evaluating team consisted of EPA and DOH programmatic staff and inspection personnel along with five industry experts specializing in bulk petroleum storage systems. A detailed report based on the evaluation is being developed by EPA's contractors and should be available by July 1, 2017. EPA contractors are also recommending a site-specific inspection routine for the facility based on its unique characteristics and EPA's newly revised underground storage tank regulations.



Navy and DLA Improve Inspection and Repair Procedures

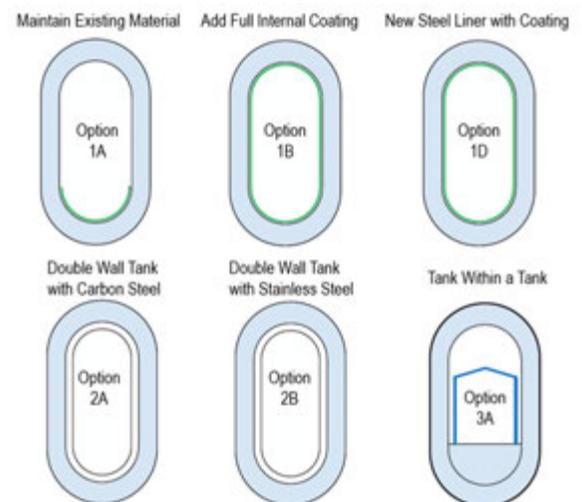
Since the January 2014 Tank 5 release caused by faulty repairs, the Navy has implemented a number of improvements to its tank inspection, repair and maintenance procedures. These improvements, along with other advances, include increased quality control and assurance efforts, revised inspection and repair specifications, and new refilling instructions. The Tank Inspection Repair and Maintenance Procedures Report, which was submitted on October 11, 2016 and is available on EPA's website, describes these improvements, the facility's construction, historical maintenance operations, the January 2014 release from Tank 5, lessons learned from that release, the tank inspection and repair schedule, and other facility information.

In-depth Tank Upgrade Analysis Underway

On December 8, 2016, EPA and DOH approved the Tank Upgrade Alternatives Scope of Work submitted by the Navy and DLA on September 8, 2016. The Scope of Work outlines a framework for a study currently underway to examine single-wall and double-walled upgrade options for the tanks. The EPA and DOH approval also requires the Navy and DLA to provide EPA and DOH with two interim progress updates on the study of tank upgrade technologies and to develop a decision process for selecting the best available practicable technology. Both the Navy/DLA and EPA/DOH have hired separate external tank experts to assist with the tank upgrade report's development and review.

As detailed in our previous Red Hill Status Update from March 2016, the Tank Upgrade Alternatives Report will cover a broad list of upgrade technologies that were surveyed for the tanks at Red Hill and also include an in-depth study of the six options chosen for detailed analysis. The six alternatives to be studied include: (1A) modifications to the current tank configuration, (1B) the current configuration plus coatings, (1D) complete replacement of the existing steel plates, construction of a double-walled tank without an accessible outer wall using either (2A) carbon steel or (2B) stainless steel, and (3A) construction of a new tank inside the existing tank.

The Scope of Work, available on EPA's Red Hill website, summarizes the information that will be collected and examined to eventually determine the initial upgrade for the tanks at Red Hill. An analysis of this information and key findings will be contained in the Tank Upgrade Alternatives Report due to be submitted in approximately January 2018.



Baseline Navy and DLA Reports Approved to Set Stage for Further Improvements

The Navy submitted a Corrosion and Metal Fatigue Practices Report and a Current Fuel Release Monitoring Systems Report. Both reports have been approved by EPA and DOH, and work is underway to investigate additional potential improvements for the fuel monitoring systems and to assess corrosion inside the large underground tanks. The reports were required by the Red Hill AOC, and they establish a baseline assessment for the existing systems, procedures and corrosion control practices at the facility.

PUBLIC MEETING AND NEXT STEPS AT RED HILL

Public Meeting Scheduled for Thursday, June 22, 2017

EPA, DOH, the Navy and DLA will host a Red Hill AOC public meeting on Thursday, June 22, 2017, at Moanalua Middle School in the early evening. The specific format and schedule for the meeting are still being developed. If you would like to attend this meeting or find out more details, please contact the EPA and DOH representatives

listed below or join our community email list by visiting www.epa.gov/red-hill/forms/red-hill-administrative-order-consent-email-list.

Important Work Planned for the Next 60 Days

MAY

- A plan to evaluate tank liner scanning techniques is due to EPA and DOH for review and approval.
- A plan to evaluate the natural attenuation of contaminants will be submitted to EPA and DOH for review.

JUNE

- A public meeting is scheduled for June 22 at Moanalua Middle School in the early evening.
- A plan for investigating new release detection systems is due to EPA and DOH for review and approval.
- A plan to evaluate groundwater modeling will be submitted to EPA and DOH for review.

For Further Information:

[EPA Red Hill Website](#)

[HDOH Red Hill Website](#)

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