



Site Investigation Quarterly Groundwater Data (March 2022–February 2024) Red Hill Former Oily Waste Disposal Facility Joint Base Pearl Harbor-Hickam, Oahu, Hawaii

Fact Sheet No. 1

April 2025

INTRODUCTION

The Navy is conducting a Site Investigation of the groundwater beneath the former **Red Hill Oily Waste Disposal Facility (OWDF)**. The Environmental Restoration, Navy program manages the former OWDF Site Investigation, which is separate from other environmental investigations at Red Hill. The **State of Hawaii Department of Health (DOH)** is the primary regulatory authority, with input from the **United States Environmental Protection Agency (EPA)**. This fact sheet summarizes the results of the OWDF quarterly groundwater monitoring activities from March 2022 to February 2024, which will be evaluated in a Site Investigation Report.

SITE LOCATION

The former OWDF is located on the island of Oahu approximately 2 miles northeast of Pearl Harbor's East Loch, in the western portion of the Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam (*Figure 1*).

SITE BACKGROUND

In the 1940s, the Navy constructed the former OWDF as a collection point for oily wastewater, including tank bottom sludges and other material generated from periodic cleaning of the Red Hill fuel storage tanks. In 1986, the OWDF ceased operations. Between 1991 and 2000, the Navy performed a Removal Action (removing the former system and petroleum-impacted soil) and a **Remedial Investigation and Feasibility Study (RI/FS)**, which included sampling and analysis of both shallow and deep groundwater. The shallow groundwater is approximately 30–50 feet **below ground surface (bgs)** and is not used for drinking water. The deep groundwater is approximately 150–250 feet bgs and is part of a groundwater system that is classified as drinking water.

The RI/FS concluded that the site did not pose a threat to human health or the environment, in part due to the removal of petroleum-impacted soil and the lack of impacts to deep groundwater (DON 2000). In 2005, DOH issued a **“No Further Action” determination (NFA)** for the former OWDF, indicating that there did not appear to be any risk and therefore no need for further action (DOH

2005). After the NFA, the Navy retained one of the deep groundwater monitoring wells at the former OWDF for sampling from 2009 onward as part of the Red Hill Bulk Fuel Storage Facility Groundwater Protection Plan (DON 2014).

SITE INVESTIGATION

The Navy proactively initiated this Site Investigation after **total petroleum hydrocarbons (TPH)** were detected in some of the OWDF groundwater samples collected between 2010 and 2016. The Navy submitted a work plan, consistent with DOH guidance (DON 2024b), outlining several activities, including installation of new groundwater monitoring wells and implementation of a 2-year quarterly groundwater monitoring program (DON 2021). In January 2021, DOH reviewed and approved the work plan.

In 2021, the Navy installed 15 new wells at the former OWDF, establishing a groundwater monitoring network of eight shallow and eight deep wells (*Figure 1*). The Navy conducted eight quarterly groundwater monitoring events. During each monitoring event, field personnel collected samples and checked each well for the potential presence of liquid fuel on the groundwater surface, which was never detected. Certified laboratories analyzed

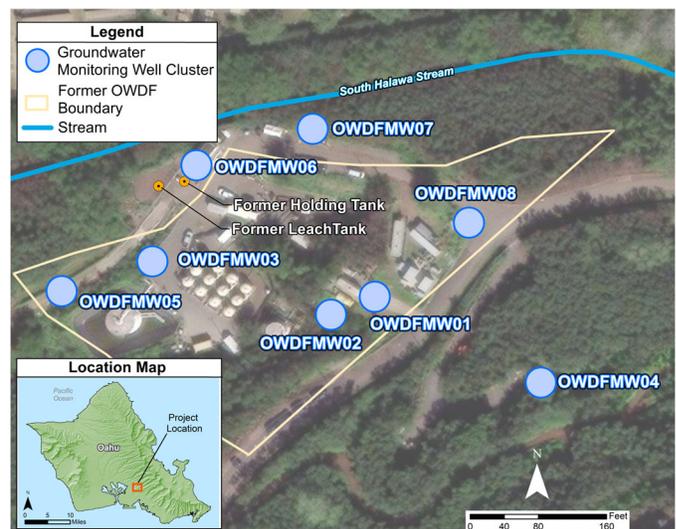


Figure 1: Groundwater Monitoring Well Network at the Former OWDF

groundwater and quality control samples for petroleum-related and other chemicals. For quality assurance, third-party consultants validated the laboratory data.

In four of the deep monitoring wells, petroleum-related chemicals (mostly TPH) were present in several samples at low concentrations above the current DOH **Environmental Action Levels (EALs)**. The DOH EALs for TPH are now lower than the concentrations that laboratories can reliably measure, causing the laboratories to flag many of these concentrations as estimates. These low concentrations, which did not persist during all sampling events, indicate that there were no significant lasting impacts to the deep wells from historical operations at the former OWDF.

In five of the shallow monitoring wells, petroleum-related and other chemicals (mostly TPH) were detected during multiple events. Two of these wells were likely impacted by the nearby former Holding Tank-Leach Tank release area (*Figure 1*), which was part of the November 2021 fuel release at the Red Hill Bulk Fuel Storage Facility (DON 2024a). In addition, a third well (OWDFMW05B) had persistent detections of petroleum-related chemicals above the EALs (*Figure 1*). The Navy continues to analyze the data from the shallow wells for the Site Investigation Report.

In 2024, based on the Navy's Site Investigation data, DOH rescinded the NFA (DOH 2024). The Navy concurred with DOH's rescission of the NFA and confirmed that the investigation would continue (DON 2024b) pursuant to the DOH-approved work plan (DON 2021).

WHAT'S NEXT?

Ongoing work for the former OWDF Site Investigation includes data evaluation, risk assessment, groundwater modeling, and preparing reports and recommendations. Future work will likely include remedy selection and implementation, in consultation with DOH.

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