

**REPORT TO THE TWENTY-EIGHTH LEGISLATURE
STATE OF HAWAII
2015**

**PURSUANT TO SENATE CONCURRENT RESOLUTION 73
REQUESTING THE DEPARTMENT OF HEALTH
TO CONVENE A TASK FORCE
TO STUDY THE EFFECTS OF THE JANUARY 2014 FUEL TANK LEAK AT
THE RED HILL FUEL STORAGE FACILITY**

**PREPARED BY:
STATE OF HAWAII
RED HILL FUEL STORAGE FACILITY TASK FORCE
DECEMBER 2014**

Introduction

The Red Hill Fuel Storage Facility is located in the south-central portion of the Island of Oahu, Hawaii, in Halawa Heights. There are 18 active and two inactive field-constructed underground storage tanks, each with a capacity of 12.5 million gallons, located at the facility. A suspected fuel release was discovered and verbally reported to the State of Hawaii Department of Health (DOH) on January 13, 2014. A release of Jet Propellant 8, also known as Jet Propulsion fuel, type 8 (JP-8) from Tank 5 was confirmed and reported to the DOH on January 23, 2014. The estimated fuel loss was up to 27,000 gallons. Immediately after the release was detected, the Navy began draining the contents of Tank 5 and collected soil vapor samples from existing vapor monitoring points and groundwater samples from monitoring wells. Results indicated the presence of elevated levels of hydrocarbons in soil vapor and groundwater near Tank 5. However, no free product was detected in the groundwater samples. Immediately following the release, drinking water samples were collected at an increased frequency from the Navy's Red Hill drinking water well and the Honolulu Board of Water Supply (BWS) Halawa and Moanalua wells. Laboratory analytical results showed that the water was within applicable safe drinking water standards.

Soil vapor and groundwater samples continue to be collected to detect any potential contamination from petroleum releases. Drinking water samples also continue to be collected by BWS and the Navy to ensure the water remains safe.

In consultation with the United States Environmental Protection Agency (EPA) and DOH, the Navy is investigating the cause of the reported release from Tank 5 and whether any free product is present outside the tank liner, the concrete surrounding the tank, or in the adjacent basalt rock. In the unlikely event that free product is detected, the Navy will remove it to the maximum extent practicable.

In 2008, the Navy developed and implemented a Groundwater Protection Plan, which the DOH approved. The plan was updated in 2009 and 2014. The existing Groundwater Flow Model and Contaminant Transport Analysis will also be updated and incorporated into the Groundwater Protection Plan.

The DOH, EPA, and Navy continue to work together on a negotiated agreement to assess the reported release of petroleum and minimize the threat of future releases.

On April 24, 2014, the Hawaii State Legislature adopted Senate Concurrent Resolution (SCR) 73 which requested the Director of Health to convene a Task Force to study the effects of the January 2014 fuel tank leak at the Red Hill Fuel Storage Facility and submit a report of the Task Force's findings and recommendations, including any proposed legislation, to the Legislature no later than 20 days prior to the convening of the Regular Session of 2015. Under SCR 73, the Task Force is requested to examine:

1. Short-term and long-term effects of the leak at the Red Hill Fuel Storage Facility, including effects relating to the health of residents, safe drinking water, and the environment,
2. Response strategies to mitigate the effects of future leaks at the Red Hill Fuel Storage Facility,
3. Ways to improve communication between the United States Navy, the State, and the public in the event of future leaks at the Red Hill Fuel Storage Facility; and
4. Implications of closing the Red Hill Fuel Storage Facility.

Task Force members include the DOH, EPA, Navy, one member from the State House of Representatives, one member from the State Senate, Department of Land and Natural Resources, BWS, and two members from the community. Appendix _____ contains a list of all the Task Force participants and alternates.

Meetings were held on September 3, October 7, November 6, and December 11, 2014 to discuss the effects of the January 2014 release, results of ongoing Navy investigations into the tank leak, Navy response actions since the leak was discovered, and recommendations for improving operations to ensure protection of Hawaii's drinking water.

In accordance with SCR 73, this report contains the Task Force's findings and recommendations.

- 1. Short-Term and Long-Term Effects of the leak at the Red Hill Fuel Storage Facility including effects relating to the health of residents, safe drinking water, and the environment.**

Findings:

The Task Force finds that the BWS and the Navy have undertaken significant efforts to assess the effects of the reported fuel leak on the environment and to protect drinking water resources. The Task Force acknowledges that the BWS has accelerated sampling at nearby drinking water sources. In addition, the Navy has performed extensive sampling and analysis of the groundwater, drinking water, and soil vapor at or near the Red Hill Fuel Storage Facility. The BWS has reported that drinking water sources remain safe. The Navy's sampling and analysis

indicated that increases of soil vapor volatile organic compound (VOC) concentrations beneath Tank 5 and nearby tanks may be attributed to the release of JP-8 from Tank 5 in January 2014. However, results of groundwater sampling and analysis indicate the release of JP-8 from Tank 5 had limited impact on the underlying groundwater and has not impacted any drinking water source.

Data from groundwater samples taken from Navy Well 2254-01 indicate that contaminant levels are below DOH Environmental Action Levels. Drinking water samples are also collected from BWS drinking water sources and the regulatory drinking water distribution point for Navy Well 2254-01. Analytical results from the drinking water samples show that the water is within applicable safe drinking water standards.

The Task Force expects that the BWS will continue periodic monitoring of its drinking water sources. The Navy will also continue periodic monitoring of the groundwater, drinking water, and soil vapor at the Red Hill Fuel Storage Facility, in accordance with the Groundwater Protection Plan. The Task Force expects the BWS and Navy to continue providing reports on those efforts to the DOH and the EPA. The reports are available to the public from the DOH.

2. Response strategies to mitigate the effects of future leaks at the Red Hill Fuel Storage Facility.

Findings:

The Task Force finds that the Navy performs periodic inspection of all petroleum, oil, and lubricant tanks and pipelines to ensure that the Red Hill Bulk Fuel Storage Tank system is properly maintained.

A Mass Technology Measurement System is also used by the Navy to assess tank tightness for all active Red Hill tanks. The tank tightness testing is performed every two years. In addition, the Navy employs an Automated Fuel Handling System to detect unscheduled fuel movements which alerts the operators of any potential fuel loss. Inventory levels are also assessed on a regular basis for trends that might reveal any potential fuel losses. Soil vapor monitoring equipment is also installed at the Facility to monitor hydrocarbon levels in the subsurface.

The Task Force further acknowledges that the drinking water from the BWS and Navy's drinking water wells are within applicable safe drinking water standards, and that numerous monitoring wells have been installed in and around the Facility to detect potential contamination in the groundwater. Subsequent to the January 2014 release, the Navy, in coordination with the DOH and EPA, installed two additional groundwater monitoring wells. Sampling results are submitted by the BWS and the Navy to the DOH, which in turn, makes the data available to the public.

The Task Force recognizes that the Navy has developed contingency plans to address potential future releases. These plans are detailed in the Navy's Integrated Contingency Plan and Red Hill Fuel Storage Facility Groundwater Protection Plan. In coordination with the DOH and EPA, the

Navy will periodically review and update these plans and will take responsible actions consistent with the plans, if necessary.

The Task Force also finds that the Navy plans to study secondary containment options and advanced leak detection technologies in collaboration with the DOH and EPA.

3. Improve communications between the United States Navy, the State, and the public in the event of future leaks at the Red Hill Fuel Storage Facility.

Findings:

The Task Force finds that all parties have demonstrated and continue to be fully committed to communicating with the public for any matters of public interest regarding the Red Hill Fuel Storage Facility. The Task Force acknowledges that the DOH, EPA, BWS, and Navy have made significant efforts to keep the public informed on the reported fuel leak. This began with a joint press conference by the DOH, BWS, and Navy immediately following the January 2014 release, and continued with participation in community outreach events, publication of numerous media releases, and active coordination between and among appropriate State and Federal agencies to remediate any potential contamination and prevent future leaks at the Facility. The Task Force expects that all parties will continue to keep the public informed of any events at the Red Hill Fuel Storage Facility that would impact the public or the environment.

4. Implications of Closing the Red Hill Fuel Storage Facility.

Findings:

The Task Force finds that the Navy operates and maintains the Red Hill Fuel Storage Facility as a strategic petroleum facility that provides critical fuel to operating forces in the Pacific region. The Task Force acknowledges that the Navy has no plans to close the Facility. The Task Force expects that the Navy will inform the public should those plans change.

5. Legislative Recommendations

- The Task Force recommends that the Legislature encourage the DOH, EPA, BWS, and Navy to continue efforts to protect Hawaii's groundwater and drinking water sources.
- The Task Force recommends that the Legislature encourage the DOH, EPA, BWS, and Navy keep the public informed on matters of public interest regarding the Red Hill Fuel Storage Facility.
- The Task Force further recommends that the Legislature encourage the DOH, EPA, and Navy to finalize a negotiated agreement for the Red Hill Fuel Storage Facility that protects drinking water resources, appropriately responds to the reported release of petroleum, and minimizes the threat of potential future releases.

Approval of Report to the Legislature by the Red Hill Task Force Members:

GARY GILL
Deputy Director for Environmental Health
Date: _____

AARON POENTIS
Program Director, Navy Region Hawaii
Date: _____

SENATOR MIKE GABBARD
Chair, Energy/Environmental Committee
Date: _____

REPRESENTATIVE CHRIS LEE
Energy/Environmental Committee
Date: _____

STEVE LINDER
Manager, UST Program, EPA Region IX
Date: _____

ERNEST LAU
Program Manager, Honolulu Board of Water Supply
Date: _____

PATRICK CASEY
Geologist, DLNR, Commission on Water Resource Mgmt.
Date: _____

STEVEN ONOUE
President, Moanalua Valley Community Association
Date: _____

DAVID YOMES
Chair, Aliamanu/Salt Lake Neighborhood Board
Date: _____

DRAFT