Board of Water Supply

Why Oahu Residents Should Be Concerned About Red Hill Underground Fuel Storage Tanks

Protecting Your Drinking Water Is Our Top Priority

The Board of Water Supply (BWS) is committed to serving safe drinking water by protecting our groundwater aquifers and takes seriously anything that could impact its ability to provide quality drinking water in sufficient quantities to meet Oahu's needs.

That's why it's so important for Oahu residents to be informed about the proposed agreement between the EPA, Hawaii State Department of Health and the U.S. Navy that was released on June 1, 2015.

What happened at Red Hill?

In January 2014, the U.S. Navy reported a 27,000 gallon jet fuel leak from Tank 5 at its Red Hill Bulk Fuel Storage Facility. This facility has 20 underground fuel tanks, each able to contain up to 12.5 million gallons of fuel. The tanks are located 100 feet above a designated drinking water aquifer that supports a number of BWS wells, including the BWS's Halawa Shaft and Moanalua wells, which together supply 25% of the drinking water to residents from Moanalua to Hawaii Kai.

How did BWS respond to the reported leak and what is it doing today?

To protect our customers' health and safety, the BWS shut down five nearby wells and tested them for petroleum chemicals. When test results indicated no contamination, the wells were reactivated for service. Since then, **we have been regularly testing these wells** to ensure the quality of the water **and want to assure the public that your water is safe to drink.**

The current test results are available on our website at www.boardofwatersupply.com. In addition to regular testing, we are conducting our own groundwater studies to understand the impact of the fuel leak on the aquifer and are working with the United States Geological Survey (USGS) to map the groundwater flow direction in the area of the tanks.

Why is BWS so concerned about this issue?

The Red Hill facility contains 187 million gallons of fuel that is close to the surface of the aquifer. The BWS believes that unless the Navy proactively improves its facility, the potential for another fuel leak is possible. The tanks have experienced leaks even before the January 2014 event and the groundwater underneath the tanks are contaminated with fuel.

Aloha Tower will fit into each of the 20 Red Hill underground storage tanks. The Tanks were constructed inside Red Hill from 1940 to 1943.

What is the BWS asking the Navy to do?

The Board of Water Supply has urged the Navy to do four things:

1. Double-line all 20 tanks.
2. Install advanced leak detection and tank corrosion protection.
3. Clean up the fuel that is already underneath the tanks.
4. Keep the BWS and the public informed of its actions.

How can Oahu residents support the BWS in its efforts to protect our drinking water?

The BWS asks Oahu residents to join us in urging the Navy to take necessary measures to protect our groundwater and the environment. You can help us by:

- Reading the Administrative Order on Consent (AOC) and Statement of Work (SOW).
- Build awareness about this issue by sharing this information with your family and friends.
- Contact your elected officials to let them know you support our efforts to protect Oahu's groundwater resources.

For your convenience, we have created a special webpage about Red Hill and how you can help: www.boardofwatersupply.com.

Frequently Asked Questions

Q: How could the wells be contaminated by a fuel leak?

A: Fuel from the tanks that leak into the groundwater can eventually spread to neighboring wells because the groundwater is always moving. The amount of fuel that contaminates the aquifer and how quickly it spreads depends on the volume of fuel released into the groundwater. A large volume of fuel released into the groundwater due to a major pipe or tank failure will contaminate the groundwater much faster and over a larger area than fuel that is slowly leaking from the tanks.

Q: Are the BWS wells showing signs of contamination?

A: Not at this time. However, contamination is present in the groundwater underneath the tanks which can move in the groundwater and spread to neighboring wells in the area. The BWS continues to test its nearby wells on a quarterly basis.

Q: What contaminants are being found in the groundwater?

A: According to Navy studies and data, petroleum hydrocarbons and various related chemicals are being found in the groundwater under the fuel tanks. Some of them include: total petroleum hydrocarbons as diesel, naphthalene, 1- methylnaphthalene, 2-methylnaphthalene, toluene, benzene and lead.

Q: What would a worst case scenario look like?

A: A catastrophic fuel release could occur as the result of structural failure of the tanks caused by an earthquake. According to Navy studies, this scenario could result in more than 1.2 million gallons of fuel released into the groundwater and 6.3 million gallons to Halawa Stream and Pearl Harbor.

Q: In such a scenario, what actions would BWS take?

A: BWS would immediately shut down our Halawa Shaft, Moanalua, and other nearby wells, assess the situation in consultation with the EPA and Hawaii State Department of Health, and assess the frequency of the water quality testing being conducted on nearby BWS wells.

Q: Are the tanks still leaking jet fuel?

A: According to Navy studies, the tanks are wearing from corrosion. In addition, tests conducted by the Navy since 2005 show petroleum contaminants are still present in the groundwater underneath the Red Hill facility. Petroleum seeping from old corroding tanks could possibly be the reason fuel is still being detected underneath the 70 year old tanks.

Q: Does the BWS have enforcement powers when it comes to protecting Oahu's water sources?

A: No. The Hawaii Department of Health has jurisdiction and regulates underground fuel tanks in Hawaii.

Q: What are the health effects of these chemicals in our water?

A: BWS is conducting studies to determine the health significance of low level petroleum chemicals in drinking water.

Q: Are there any national environmental standards for underground fuel storage tanks?

A: Yes. There are federal and state regulations that apply to all underground storage tanks. However, Red Hill is a field-constructed underground tank that is deferred from many of the requirements that must be met by smaller facilities. In 2011, EPA proposed changes that would cancel Red Hill's exemption from the rules. The proposed changes are still pending.

For more information:
Visit the BWS's special Red Hill web page at
www.boardofwatersupply.com