

Navy pump can't fully contain fuel leak, study finds

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The groundwater near where the Red Hill Bulk Storage facility spilled thousands of gallons of jet fuel into both the environment and drinking water moves in both the mauka and makai directions — and the pumping that the Navy has been doing out of Red Hill does not appear to

fully contain contamination.

That's according to new dye tracer study results shared at the second biannual meeting for the Fuel Tank Advisory Committee, which was created by the Legislature in 2016 to study issues related to leaks of underground fuel-storage tanks at military facilities following a spill of 27,000 gallons of jet fuel from the Red Hill

facility in 2014. In 2021, the same facility contaminated with around 19,000 gallons of jet fuel the drinking water for 93,000 Oahu residents served by the Navy water line.

The Navy is currently studying the site to attempt to quantify how many fuel releases and how much fuel has spilled into the environment over the past 80 years,

Navy Closure Task Force — Red Hill Cmdr. Ben Dunn said in the meeting. He expects the study results to be ready by next year. A 2022 letter from the Navy to former Congresswoman Tulsi Gabbard reports 85,000 gallons of fuel released into the environment since at least 1948, though the letter notes the number is based on unverified notes and records.

The facility has now removed 3,785 gallons of residual and 3,446 gallons of sludge fuel from the tanks. Six tanks are in the decommissioning process while five others are in the sludge removal process. Around 99% of the pipeline has been cleaned and 8% has been removed and shipped to Texas for recycling, Navy Closure Task Force — Red Hill Cmdr.

Francisco Barreto said in the meeting, adding that the remaining 1% of the 10-mile pipeline left to be cleaned is associated with the fuel tanks. More than 2,500 gallons of residual fuel has been removed from the pipeline, he said.

The Navy aims to reopen its Aiea/Halawa shaft soon —

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the Hawaii Department of Health conditionally approved its reopening — while the Red Hill shaft is planned to reopen sometime in 2028 once a drinking water filter system is installed.

Dunn emphasized that Navy drinking water has been deemed safe since 2022 and there has been no data to indicate fuel contamination has traveled to groundwater wells outside of Navy property, but Board of Water Supply manager and chief engineer Ernest Lau pushed back on that claim.

Lau pointed to three Navy monitoring wells outside the military that had detections and exceedances of total petroleum hydrocarbon, a chemical compound originating from crude oil also referred to as TPH, multiple times between 2022 and 2026, with the most recent exceedance detected on April 29. TPH is detected in diesel, oil and gas ranges, and only the gas range was undetected.

"I'm a little confused on the conclusion that seems to be presented here that contamination is not moving off a Navy parcel when your own data doesn't seem to support that," Lau told Dunn. "I don't agree that you can reach that conclusion when your own data seems to indicate otherwise."

Dunn replied that screening for TPH is simply a "screening indicator" and could be hundreds of different compounds.

"It can be representative of fuel, but it's nothing to hang your hat on with respect to determining the presence of fuel," Dunn said. "You have to do additional



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From left, Navy Closure Task Force — Red Hill Cmdr. Francisco Barreto, Adm. Lester Ortiz and Cmdr. Ben Dunn attended the Fuel Tank Advisory Committee's second biannual meeting Thursday.

groundwater can also move and the concentrations can vary," Lau said. "You reduce the frequency, you lose the ability to spot those plumes or things that are moving with the groundwater."

Hawaii Department of Health Red Hill environmental coordinator Melissa Thaw said in the meeting that DOH has not allowed for a reduction in testing in the majority of monitoring wells. Only three wells at the center of the plume, which always test positive for contaminants, were allowed to reduce the frequency of testing, she said.

Thaw said that the contamination plume appeared to have shrunk and stayed spatially stable.

But a new tracer dye study, presented by University of Hawaii geochemist Don Thomas, appeared to contradict the claims that contaminants haven't been moving.

For the study, red dye was inserted into an injection well near the spill and traced in surrounding municipal groundwater wells to see how the groundwater moved. The most sur-

vey. The registry is also performing nationwide outreach in an attempt to connect with as many impacted people as possible.

Of 420 analyzed respondents, 124 reported experiencing severe symptoms, 202 reported experiencing moderate symptoms and 94 reported mild symptoms. But, there were common symptoms among the three groups. Around 81% of respondents reported fatigue, 69% reported sleep problems, 65% reported headaches and memory loss, 59% reported anxiety and 58% reported ear problems.

Thomas added that while the results from the study were informative, more work needs to be done to draw conclusions from the data. The funding for the study, which was provided by the Office of Naval Research, has run out but his team was working on other avenues to obtain funding.

Several members of the committee and the public urged the Navy and federal and state agencies to figure out a way to continue Thomas' work.

Lau asked Navy Closure Task Force - Red Hill Adm. Lester Ortiz to commit to allowing Thomas access to Navy monitoring wells to continue the study and also

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Several members of the public shared skepticism over the Navy's data, and urged regulators to do their own independent tests and analyses.

"The Navy is the contaminator. Yet you are relying on Navy-collected data, Navy-conducted testing, and the Navy's interpretation of their own results to reassure this community. Am I the only person that finds this absolutely insane?" Retired Army Maj. Mandy Feindt said. "That is like the police asking an alleged

"You have to do additional analysis."

Dunn did not expand on whether the Navy did not hit on the wells, Dunn said, adding that the quarterly frequency is "industry standard." Currently, the Navy tests for contaminants twice per month.

Lau vehemently disagreed with Dunn, adding that the Board of Water Supply has always pleaded with regulators to not decrease testing.

"Groundwater is always moving and things that are being carried with that

ter moved. The most surprising result, Thomas said, was that the dye was detected moving both contaminated water source could be pumped out.

"The reality is Red Hill's pumping out of 4.4 million gallons (of water) per day, which it was doing during much of the time this monitoring was occurring, is not able to fully contain contamination," Thomas said.

The path of the dye underscores how Hawaii's geology poses extreme challenges to cleaning up

continue the study, and also publicly committed that the Honolulu Board of Water Supply would cooperate with the community on that is feasible for them," Ortiz said.

Tara Sutton, director of community engagement for the Red Hill Registry, which aims to monitor long-term health impacts of those who ingested fuel-contaminated water, also shared new findings at the meeting. So far, 522 people have completed enrollments while 3,034 still need to finish their second

police asking an alleged abuser to investigate themselves, then accepting their explanation for why the victim's residence was not especially since the water infrastructure that had the contaminated water flow through it has not been replaced.

The facilitator for the meeting said PFAS (per- and polyfluoroalkyl substances), or forever chemical, issues will be addressed at the next Pearl Harbor-Hickam Restoration Advisory Board meeting in January.