

JOSH GREEN, M.D.
GOVERNOR OF HAWAII
KE KIA'ĀINA O KA MOKU'ĀINA 'O HAWAII



KENNETH S. FINK, M.D., M.P.H., M.G.A.
DIRECTOR OF HEALTH
KA LUNA HO'OKELE

STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

December 23, 2024

The Honorable Ronald D. Kouchi,
President and Members of the Senate
Thirty-second State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Nadine K. Nakamura,
Speaker
and Members of the House of
Representatives
Thirty-second State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Nakamura, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the report on the Fuel Tank Advisory Committee, prepared by Hawaii Department of Health, Solid & Hazardous Waste Branch, Underground Storage Tank Section, pursuant to Hawai'i Revised Statutes (HRS) §342L-62.

In accordance with Section 93-16, Hawaii Revised Statutes, I am also informing you that the report may be viewed electronically at:

<https://health.hawaii.gov/opppd/departments-of-health-reports-to-2025-legislature/>

Sincerely,

Kenneth S. Fink, M.D., M.P.H., M.G.A.
Director of Health

Enclosures

- c: Legislative Reference Bureau
- Hawaii State Library System (2)
- Hamilton Library

Fuel Tank Advisory Committee

Report to the 2025 Regular Session Legislature



Prepared by
Hawai'i Department of Health
Solid & Hazardous Waste Branch
Underground Storage Tank Section
December 2024

**Report to the Thirty-Fourth Hawai‘i State Legislature
2024 Fuel Tank Advisory Committee Meetings**

Contents

Statutory Requirement 3

Meetings by the Numbers..... 3

March 7, 2024 Meeting Summary 4

Meeting Resources 4

Meeting Summary..... 5

Major Developments Since November 2023 (00:10:15)..... 5

Closure Process Update (00:56:26)..... 6

Site Assessment for Closure (01:28:31) 6

Navy Housing Drinking Water System (01:55:36)..... 7

Public Questions/Comments (03:41:04) 7

October 9, 2024 Meeting Summary..... 7

Meeting Resources 7

Meeting Summary..... 8

Public Health Monitoring (00:25:59) 8

Groundwater Monitoring and Analysis (00:51:48)..... 8

Drinking Water Update (01:43:05) 9

NCTF-RH Site Assessment, Investigation, and Remediation (02:41:46)..... 10

Public Questions/Comments (03:09:25) 10

**Report to the Thirty-Fourth Hawai‘i State Legislature
2024 Fuel Tank Advisory Committee Meetings**

Statutory Requirement

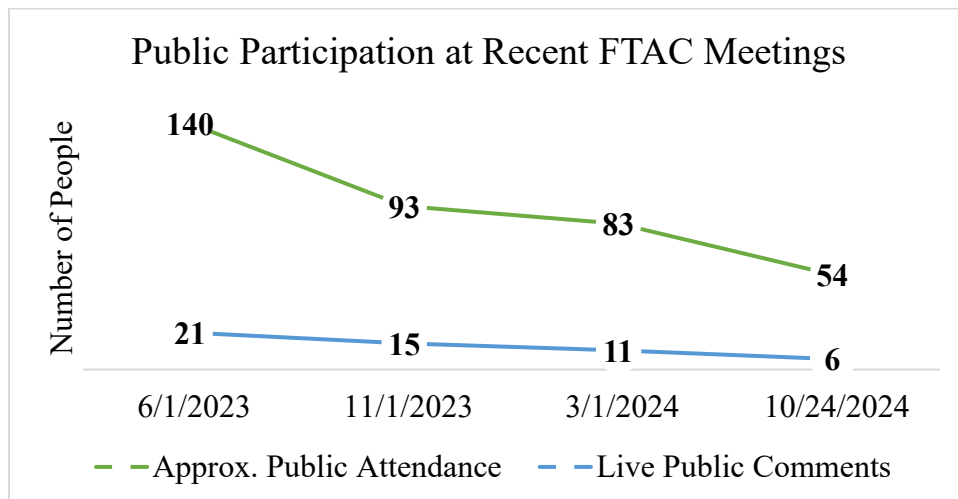
The Fuel Tank Advisory Committee (FTAC) was established under Hawai‘i Revised Statutes (HRS) §342L-61. According to HRS §342L-62, the FTAC shall:

[S]tudy issues related to leaks of field-constructed underground fuel storage tanks at the Red Hill Bulk Fuel Storage Facility, Kuahua Peninsula, Pacific Missile Range Facility Barking Sands, Hickam Pol Annex, and Schofield Barracks Military Reservation. The advisory committee shall consider:

- (1) The short- and long-term effects of leaks of the fuel tanks, including effects relating to the health of residents, safe drinking water, and the environment;
- (2) Response strategies to mitigate the effects of leaks from fuel tanks;
- (3) Methods to improve communication between the United States Navy, Air Force, and Army; the State; any local board of water supply; and the public in the event of a leak of any fuel tank;
- (4) Groundwater test results in relation to the surrounding areas of fuel tank facilities, with a particular emphasis on the groundwater near the Red Hill Bulk Fuel Storage Facility;
- (5) The implications of shutting down any fuel tank facility; and
- (6) Updates on progress toward meeting agreement goals between the State, the affected county, and the federal government.

Following the fuel spills from the Red Hill Facility in May and November 2021, FTAC meetings have focused solely on issues related to Red Hill. In 2024, the FTAC met on March 7th and October 9th.

Meetings by the Numbers



**Report to the Thirty-Fourth Hawai‘i State Legislature
2024 Fuel Tank Advisory Committee Meetings**

Public Attendance in 2024		
	3/7/24 Meeting	10/9/24 Meeting
Online Attendance	64	49
In-Person Attendance	~19	~5
Total	~83	~54

Public attendance excludes the FTAC members themselves (but other attendees from the same agencies are counted) and staff/contractors from the Hawai‘i Department of Health (DOH), U.S. Environmental Protection Agency (EPA), and U.S. Department of Defense (DoD). Numbers are estimated, as attendees do not always provide their actual agency affiliations.

Other Numbers				
	6/6/23 Meeting	11/15/23 Meeting	3/7/24 Meeting	10/9/24 Meeting
Written Public Comments ¹	11	1	1	1
Live Public Comments	21	15	11	6
FTAC Member Attendance ²	12	9	9	8

March 7, 2024 Meeting Summary

Meeting Resources

The resources below are available to the public. Speaker presentations were posted in advance of the meeting.

- **Agenda:** <https://health.hawaii.gov/ust/files/2024/02/Mar-7-2024-FTAC-Final-Agenda-3.pdf>
- **Presentations:** <https://health.hawaii.gov/ust/ust-home-test/ust-red-hill-project-main/red-hill-task-force-meeting/>
- **Recording:** <https://youtu.be/uzJgP38rts0?si=TocbmZn3vn4ZGQqP>

¹ For the June 6, 2023, meeting, 3 written commenters also provided comments during the live comment portion of the meeting. For the November 15, 2023, and March 7, 2024, meetings, the sole written commenter also provided comments during the live comment portion of the meeting.

² FTAC member attendance in this table includes the U.S. Department of the Navy (Navy). The Navy was not counted in FTAC member attendance in previous reports to the legislature.

Report to the Thirty-Fourth Hawai‘i State Legislature 2024 Fuel Tank Advisory Committee Meetings

Meeting Summary

The DOH convened the 12th FTAC meeting on March 7, 2024, in-person at the Hawai‘i Convention Center’s Lili‘u Theater in Honolulu and virtually on Zoom. The meeting was recorded and broadcast by 'Ōlelo Community Media.

At 1:00 PM Hawai‘i Standard Time (HST), Chair Kathleen Ho, DOH Deputy Director for Environmental Health, convened the meeting. Other members present were: Hawai‘i State Senator Mike Gabbard, Dean Uyeno (Hawai‘i Department of Land and Natural Resources, Board of Land and Natural Resources), Ernest Lau (Honolulu Board of Water Supply), Dr. Melanie Lau (public appointee), Ryan Imata (Hawai‘i Department of Land and Natural Resources, Commission on Water Resource Management), Ashley Nishihara (public appointee), Claire Trombadore (U.S. Environmental Protection Agency) and Vice Admiral (VADM) John Wade (U.S. Department of the Navy). The meeting was facilitated by DOH contractor, Keith Mattson.

Major Developments Since November 2023 ([00:10:15](#))

VADM Wade, Commander of Joint Task Force – Red Hill (JTF-RH) provided his final defueling update to the FTAC members. As of this meeting, 104,703,574 gallons (gal), or 99% of the fuel in the Red Hill Bulk Fuel Storage Facility, had been removed. Roughly 28,000 gal of sludge and 4,000 gal of residual fuel that cannot be drained without deconstructing the pipes was estimated to remain in the facility.

Presentation: <https://health.hawaii.gov/ust/files/2024/03/JTF-RH-FTAC-7MAR24-Final-v3-rev.pdf>

VADM Wade and Rear Admiral (RADM) Stephen Barnett covered the transition from JTF-RH to Navy Closure Task Force – Red Hill (NCTF-RH). Moving forward, RADM Barnett will be responsible for the remaining sludge and residual fuel removal and environmental remediation as Commander of NCTF-RH and Navy Region Hawai‘i. RADM Barnett shared the NCTF-RH’s mission statement, organizational chart, and websites.

Presentation: <https://health.hawaii.gov/ust/files/2024/03/2b.pdf>

DOH and EPA discussed the regulatory framework used to oversee defueling. DOH acknowledged that JTF-RH had completed defueling ahead of schedule but emphasized that residual fuel removal will remain a top priority. EPA summarized regulator efforts to review and oversee each component of JTF-RH’s Defueling Plan. EPA also planned conduct an interim defueling completion inspection under its 2023 Administrative Consent Order (ACO), which has since been completed.

Presentation: <https://health.hawaii.gov/ust/files/2024/02/Item-2.c-DOHEPA-Defueling-Oversight.pdf>

The presentations were followed by a question and comment period for the FTAC members.

Report to the Thirty-Fourth Hawai‘i State Legislature 2024 Fuel Tank Advisory Committee Meetings

Closure Process Update ([00:56:26](#))

Rear Admiral (RDML) Marc Williams, Deputy Commander of NCTF-RH, provided an early overview of the tank cleaning process. He discussed the “Layers of Environmental Protection” that will be used, such as spill response drills, rover inspections, and infrastructure integrity testing. He concluded with a brief description of the sludge and pipe removal process.

Presentation: <https://health.hawaii.gov/ust/files/2024/03/3a.pdf>

DOH and EPA summarized Closure Plan requirements under DOH’s 2022 Emergency Order (EO) and EPA’s 2023 ACO. As of this meeting, DOH and EPA had not approved any portions of the NCTF-RH’s Closure Plan but had commented on several submittals. The next submittal would cover NCTF-RH’s tank cleaning proposal.

Presentation: <https://health.hawaii.gov/ust/files/2024/02/Item-3.b-DOHEPA-Closure-Oversight.pdf>

The presentations were followed by a question and comment period for the FTAC members.

Site Assessment for Closure ([01:28:31](#))

DOH and EPA shared websites where people can find groundwater data, environmental plans, and regulator correspondence. To expedite the path to remediation, both agencies issued letters of expectations for NCTF-RH’s forthcoming Site Assessment Plan, a requirement of DOH’s 2022 EO and EPA’s 2023 ACO. DOH and EPA also presented updated plume maps showing changes in total petroleum hydrocarbon (TPH) detections over time since the November 2021 release.

Presentation: <https://health.hawaii.gov/ust/files/2024/03/Item-4.a-DOHEPA-Site-Assessment-Expectations.pptxRv.pdf>

TPH-d plume map animation: https://health.hawaii.gov/ust/files/2024/02/TPHo_V5-D-Final.mp4

TPH-o plume map animation: https://health.hawaii.gov/ust/files/2024/02/TPHd_v8-D-FINAL.mp4

Captain (CAPT) James Sullivan, NAVFAC Commanding Officer, and RDML Williams presented a timeline and flow chart of planned activities related to site assessment, site investigation, and remediation required for closure.

Presentation: <https://health.hawaii.gov/ust/files/2024/03/4b.pdf>

The presentations were followed by a question and comment period for the FTAC members.

Report to the Thirty-Fourth Hawai‘i State Legislature 2024 Fuel Tank Advisory Committee Meetings

Navy Housing Drinking Water System ([01:55:36](#))

Chris Waldron, Engineer for Navy and Marine Corps Force Health Protection Command, presented NCTF-RH’s technical review of low-level TPH detections from the Joint Base Pearl Harbor-Hickam (JBPHH) water system. NCTF-RH concluded the detections were due to “laboratory method challenges” and not petroleum in the drinking water. Mr. Waldron explained the lines of evidence supporting this conclusion.

Presentation: <https://health.hawaii.gov/ust/files/2024/03/5.pdf>

Corine Li, EPA Region 9 Water Division, Drinking Water Section Manager, and Christopher Chen, EPA Region 9 Enforcement and Compliance Assistance Division, Drinking Water Enforcement Officer, discussed EPA’s responses to recent complaints from JBPHH water system customers. A report from EPA’s response to February 2024 complaints was forthcoming but has since been released. EPA’s planned follow-up actions included a fingerprint analysis, collecting split samples, and requiring NCTF-RH to continue testing the JBPHH water system under the 2023 ACO.

Presentation: <https://health.hawaii.gov/ust/files/2024/02/Item-6b-DW-EPA-Actions.pdf>

The presentations were followed by a question and comment period for the FTAC members.

Public Questions/Comments ([03:41:04](#))

Public attendees both in-person and on Zoom had an opportunity to provide comments and ask questions. The meeting adjourned at approximately 6:45 PM HST.

October 9, 2024 Meeting Summary

Meeting Resources

The resources below are available to the public. Speaker presentations were posted in advance of the meeting.

- **Agenda:** <https://health.hawaii.gov/ust/files/2024/10/Oct-2024-FTAC-Agenda.pdf>
- **Presentations:** <https://health.hawaii.gov/ust/ust-home-test/ust-red-hill-project-main/red-hill-task-force-meeting/>
- **Recording:** <https://youtu.be/yAXmrJIITwg?si=iwada-dmOxnaUklz>

Report to the Thirty-Fourth Hawai‘i State Legislature 2024 Fuel Tank Advisory Committee Meetings

Meeting Summary

The DOH convened the 13th FTAC meeting on Oct 9, 2024, in-person at the Neal S. Blaisdell Center’s Pikake Room in Honolulu and virtually on Zoom. The meeting was recorded and broadcast by 'Ōlelo Community Media.

At 1:00 PM HST, Chair Kathleen Ho, DOH Deputy Director for Environmental Health, convened the meeting. Other members present were: Hawai‘i State Senator Mike Gabbard, Ernest Lau (Honolulu Board of Water Supply), Dr. Melanie Lau (public appointee), Ryan Imata (Hawai‘i Department of Land and Natural Resources, Commission on Water Resource Management), Ashley Nishihara (public appointee), Claire Trombadore (U.S. Environmental Protection Agency) and RDML Williams (U.S. Department of the Navy). The meeting was facilitated by DOH contractor, Keith Mattson.

Public Health Monitoring ([00:25:59](#))

Elizabeth Boyle, Senior Program Officer at the National Academy of Sciences, Engineering, and Medicine, presented plans for an upcoming consensus study on clinical follow-up and care for people impacted by the JP-5 releases from Red Hill. The study will result in a report that provides advice on clinical action for monitoring the health of exposed community members. NASEM will hold public meetings in 2025, followed by analysis, peer review, and disseminating the report in 2026.

Presentation: <https://health.hawaii.gov/ust/files/2024/10/Red-Hill-Presentation-for-Jet-Fuel-Advisory-Committee-Meeting.pdf>

Rosana “Sanie” Weldon, PhD, Director of the University of Hawai‘i (UH) Red Hill Registry, provided an overview of this project. The registry aims to connect the affected community to services, offer educational programs, and monitor participants’ health status over time to understand the impacts of fuel exposure. The registry will start registering participants in 2025. Future engagement will include listening sessions, conversations with healthcare professionals, and engaging with community leaders.

Presentation: https://health.hawaii.gov/ust/files/2024/10/2024.10.09-Red-Hill-Registry_FTAC_V2.pdf

The presentations were followed by a question and comment period for the FTAC members.

Groundwater Monitoring and Analysis ([00:51:48](#))

Robert Whittier, DOH geologist, provided an overview of basic groundwater flow and contaminant transport principles, using the recent detections of polycyclic aromatic hydrocarbons (PAHs) in BWS Aiea Wells as an example. DOH concluded the high molecular weights of the PAHs found in the Aiea Wells indicate the PAHs came from a nearby industrial

Report to the Thirty-Fourth Hawai'i State Legislature 2024 Fuel Tank Advisory Committee Meetings

source, as PAHs found at Red Hill have low molecular weights. Other factors supporting nearby origin included sustained rain preceding the detections and Aiea Wells being shut off since 2021.

Presentation: <https://health.hawaii.gov/ust/files/2024/10/DOH-Contaminant-Transport-FTAC.pdf>

Donald Thomas, PhD, geochemist and Director of the UH Center for the Study of Active Volcanoes, shared initial insights from UH's ongoing groundwater flow study in the Pearl Harbor basin. The data so far indicates the Navy's groundwater flow model does not accurately reflect site-specific conditions. Electrical resistivity tests also indicate the discharge of fresh water into the ocean through caprock, which was originally theorized by BWS' Chester Wentworth, PhD, in 1951.

Presentation: https://health.hawaii.gov/ust/files/2024/10/New-Insights-Into-Groundwater-Flow_10_7b.pdf

The presentations were followed by a question and comment period for the FTAC members.

Drinking Water Update (01:43:05)

Paul Winkler, PhD, BWS consultant from Winkler Analytical Consultants, summarized his review of the Navy's analysis and technical memorandum on low-level TPH detections during long-term monitoring (LTM), which NCTF-RH spoke about at the March 7, 2024, FTAC meeting. He concluded the samples were not collected according to EPA recommendations and found the data unusable for proving the absence of TPH in the drinking water system. NCTF-RH and BWS agreed to meet separately to discuss Dr. Winkler's review.

Presentation: https://health.hawaii.gov/ust/files/2024/10/BWS-Winkler-AQA-FTAC-Presentation_100324_rev4-FINAL.pdf

RDML Williams and CDR Benjamin Dunn, NCTF-RH Deputy for Environment & Remediation, presented results from the 24-month LTM program and introduced the follow-on extended drinking water monitoring (EDWM) program. Based on 9,200 samples collected during LTM testing, NCTF-RH concluded JP-5 was not present in the JBPHH drinking water system. EDWM will include additional fuel-related analytes and forensic methods to determine the chemical makeup of any TPH detections. As of this meeting, 3,500 samples were collected but the EDWM plan had not been approved by EPA.

Presentation: <https://health.hawaii.gov/ust/files/2024/10/4.b-Navy-DW-v2024-10-03.pdf>

Claudia Espinoza, EPA Region 9 Drinking Water Division, environmental engineer, reported EPA's progress on action items presented at the March 7, 2024, FTAC meeting. These included EPA's review of chromatograms, split sample collection, and independent inspections, all in response to the TPH detections from LTM sampling. Future action items included incorporating the EDWM plan into the 2023 ACO and completing a lab study on chlorine interactions with surrogates in drinking water.

Presentation: <https://health.hawaii.gov/ust/files/2024/10/4.c-EPA-DW-Update.pdf>

Report to the Thirty-Fourth Hawai'i State Legislature 2024 Fuel Tank Advisory Committee Meetings

The presentations were followed by a question and comment period for the FTAC members.

NCTF-RH Site Assessment, Investigation, and Remediation ([02:41:46](#))

RDML Williams and CDR Dunn summarized the lines of effort and general timeline for site assessment, site characterization/investigation, and the eventual selection of remediation options for Red Hill. As part of this effort, NCTF-RH has installed 44 groundwater monitoring wells and continues to add more. NCTF-RH also presented a snapshot of its current groundwater flow model that was recently submitted to regulators.

Presentation: <https://health.hawaii.gov/ust/files/2024/10/5-Navy-Environmental.pdf>

The presentations were followed by a question and comment period for the FTAC members.

Public Questions/Comments ([03:09:25](#))

Public attendees both in-person and on Zoom had an opportunity to provide comments and ask questions. The meeting adjourned at approximately 5:45 PM HST.

Before the meeting was adjourned, the following recommendations were made by an FTAC member: 1) FTAC meetings be increased from semi-annually to quarterly; and 2) the Hickam POL (petroleum, oil, lubricant) pipeline be covered at the next FTAC meeting.