TITLE: CLOSE RED HILL BULK FUEL STORAGE FACILITY

The HSTA Board of Directors calls for the immediate emptying of fuel and full closure of the Red Hill Bulk Fuel Storage Facility. HSTA will support actions that call for the closure of the facility including joining the coalition being spearheaded by the Sierra Club of Hawaii and allow the use of its logo in this endeavor.

Submitted by: O. Tui

Originator: O. Tui

Rationale: The 2008 HSTA Convention passed CLEAN DRINKING WATER IN PUBLIC SCHOOLS: The Hawaii State Teachers Association believes that every school’s drinking water should meet Environmental Protection Agency requirements for clean drinking water. HSTA further believes that school water should be tested every six months and irregularities should be reported immediately. Multiple Hawaii public schools have been affected by petroleum products being found in their water supply and a large portion of the Oahu drinking water supply is at risk of being contaminated. Governor Ige and Hawaii’s entire congressional delegation have called for the immediate closure and the Hawaii Department of Health has ordered the tanks to be emptied. See related Sierra Club of Hawaii presentation attached.
Red Hill Updates

Koʻolau Waialua Alliance
December 6, 2021
Outline

• Cultural/Historical Background
• Red Hill Recap
• Contested Case Status
• Ongoing Concerns
• What Can You Do?
Waiola o Moanalua: Culture and History

• Kahu “Roddy” Kamawaelualani Kawehi Akau: “The creation myth of Moanalua describes how the goddess Kahikilaulani came across the ocean in a canoe, bearing gifts for her new husband Kamawaelualani, in search of fresh water, the waiola that her homeland Kahiki-ku did not have in abundance.”

• “My great great grand-aunt, Namakahelu [Makaena], the last chantress of Moanalua, chanted an ancient oli, the core of my family genealogy, and in it she describes how waiola begins at the back of the valley and flows toward the sea, bringing all its life-giving nature throughout. . . .”
Waiola o Moanalua: Culture and History

- Kepoʻo Keliʻipaʻakaua: “The waters of what is now known as the Moanalua-Waimalu aquifer have long sustained the life of the plants, animals and people of the region. Straddling the traditional boundary between the moku of Kona and ‘Ewa, these waters have fed area streams and springs that supported ecosystems that our ancestors cared for and were fed by. The aquifer sits ma uka of Ke Awalau o Puʻuloa (Pearl Harbor), an area once renowned for its bountiful seafood, like oysters (pipi) and awa (milkfish), as well as the sweet kāï kalo and ‘awa -- all made possible by abundant fresh water. These sacred waters were brought forth by the akua Kāne and Kanaloa in nearby Waimalu and Waiawa, their first stop in Hawaiʻi.”
Waiola o Moanalua: Culture and History

- Rich, “royal” lands
- Loʻi kalo: taro leaves “so large that the keepers groped in the dark [beneath them] for taro for the chiefs”; fed by spring named ʻĪemi
- Puʻuloa: 30 loko iʻa (fishponds), prized fishery; Moanalua: five loko iʻa; Keʻehi: 13 loko iʻa, 7 fisheries
Waiola o Moanalua: Culture and History

• **Today:** “Southern O‘ahu Aquifer” is one of 9 EPA Region IX Sole Source Aquifer i.e. the only, irreplaceable water source for a community.

• BWS Hālawa Shaft provides 20% of O‘ahu’s municipal water, serves 450,000 residents plus businesses, hospitals, schools from Hālawa to Maunalua.

• Groundwater discharge - streams, springs, estuaries - continues to feed environment, people.
Red Hill Recap

- ~150-180 million gallons of petroleum fuel stored in 14, 12.5 million gallon-capacity tanks (note: 2 tanks decommissioned, 4 tanks currently empty for inspection, repair)
- Tanks were built in the early 1940s, 100 feet over the Southern O'ahu Aquifer
- Aquifer now serves over **450,000 residents** (plus tourists, businesses, etc. from Hālawa to Maunalua)
- Tank walls when new were ¾” thick; now corroded to less than 1/3 of that in some places, and multiple “through-holes” have been detected
- Eight out of 14 tanks currently in actual use (i.e. with fuel in them) have not been inspected per industry and Navy standards in 20+ years (three for 30+years)
- **180,000 gallons** (likely conservative) spilled since the 1940s; petroleum components have been found in the groundwater
Red Hill Recap: Recent Spills, Violations

- **2014**
  - In 2014, 27,000 gallons of fuel leaked from Tank 5

- **Oct. 2020**
  - In late 2020, a leak began from pipelines in Pearl Harbor, which was not disclosed during our contested case hearing (despite 2 pipeline tests and a specialist Navy contractor indicating it was an “active leak”)

- **2020**
  - In 2020, a routine DOH inspection resulted in $300k+ in fines due to failures to follow safety procedures

- **May 2021**
  - In May 2021, another leak of 1,600 gallons occurred at the Red Hill facility, due to human error and an explosive change in pressure
Red Hill Recap: Recent Spills, Violations

In Sept. 2021, Red Hill Facility shut down for 1 week due to mysterious pressure changes.

In November, 14,000 gallons of “water-fuel” mixture released from a drain line; fumes prompt 911 calls.

Whistleblower e-mails reveal “wrongful withholding of information” regarding leaks, infrastructure.

Hundreds of families report odor, oil slicks in water, illnesses. RH shaft shut down without notifying BWS; fuel confirmed in RH shaft and BWS shuts down Hālawa shaft.
Sierra Club contested case hearing petition on the Navy Underground Storage Tank permit application in June 2019

Board of Water Supply joined in October 2019
• Note: Hotel Pier fuel leak and notice of violations occurred in March and October/November 2020

Contested case hearing held in February 2021, reopened in July

Recommended D&O issued in September 2021
Contested Case Hearing: Status

- Whistleblower e-mails leaked in October 2021
- October 20 contested case hearing response deadline now extended to December 19

According to Navy spokesman Mike Andrews, who provided written responses to questions, the Navy did not confirm the source of the problem until July. That was several months after the conclusion of the contested case hearing.
DOH Notice of Violation: October 27

• Notice of Violation issued in October 2021 may result in further delays:
  • Failure to operate and maintain ongoing corrosion protection to metal components of the portion of the Navy’s tank and piping that contain regulated substances and are in contact with the ground. This violation resulted in a $30,000 penalty;
  • Failure to perform line tightness testing of repaired piping before return to service resulted in a $179,982 penalty;
  • Failure to perform an annual liquid tightness test on spill prevention equipment to prevent releases to the environment. This resulted in a penalty of $22,950;
  • Failure to perform an adequate visual walkthrough inspection of hydrant pits, resulting in a penalty of $2,250; and
  • Failure to maintain adequate release detection for two double-walled underground product recovery storage tanks. This penalty amounted to $90,000.
Nov. 10 Motion to Reopen

Naval officer informed DOH:

- “inaccurate testimony had been submitted, and important information had been wrongfully withheld by the Navy in the contested case proceedings.”
- “corrosion and leak detection issues, historical data, and the full extent of the Red Hill Facility including tanks and piping that are subject to permitting and regulation by the State.”
- “historical records of corrosion issues, including holes in tanks, that are being hidden from the regulators.”

Issue: further delays before decision made means fuel remains in tanks
Ongoing Concerns

• Challenge: Voluminous technical documentation, complex “system of systems” results in political deference to Navy assurances

• Contested Case Hearing, Administrative Order of Consent, and state Red Hill Fuel Tank Advisory Committee have helped demystify the situation – and heighten concerns

• Note: Risk assessment, other key components of AOC remain unfulfilled
Ongoing concerns: Assurances can’t be trusted

• The Navy’s “system of systems” is a system of band-aids that is full of holes:
  • Navy has no idea how bad the corrosion may be
    • Concrete “casing” around steel tanks actually traps moisture around the steel
      • Water + steel = rust, corrosion!
    • Cannot directly observe tank conditions where corrosion is occurring due to concrete
  • Inspection method is inherently unreliable
  • Destructive testing on 10 steel “coupons” showed 40% miss rate in inspections
  • Eight tanks uninspected for 20-plus years despite Navy standard of 10-year inspection cycle
Ongoing Concerns: “System of Systems”

• Tank tightness testing (biannual):
  • Cannot detect slow leaks and may allow for 1,600 gallons to leak without any indication of vulnerability
    • Slow leaks could prelude larger or multiple leaks, especially when combined with other events
  • Cannot detect future leaks or near-through holes

• Tank fuel level monitoring
  • Alarm does not sound unless there is a ½” of fuel level change under normal conditions – i.e. 2,400 gallons will be lost before an alarm even sounds
  • Alarm won’t sound until a much greater loss if fuel is being “moved”

• Do these even work? (Hotel Pier leaked for >6 months, could not be confirmed until July 2021; fuel in Nov. release, in RH shaft – no idea where came from)
Ongoing Concerns: Blind Spots

The Navy cannot prevent:

- **Earthquakes:**
  - 27% chance of leaking between 1,000-33,000 gallons of fuel next year, 80% over the next five, without an earthquake
  - Earthquake in 1948 resulted in 1,100 barrels (about 46,000 gallons) lost, when tanks were not 80 years old and not (as) corroded

- **Human error:**
  - 2014 spill, May 2021 spill were due to “human error”
  - 2020 inspection and resulting notice of violation(s)
  - May 2021 spill – highlights explosive consequences for just one person’s error
  - Combined with other weaknesses (undetected leaks, possible spark/fire sources) could lead to catastrophe
  - See also: Exxon Valdez, Deepwater Horizon, etc.

- **Human malice**

- **Murphy’s law:** undetected leak + electrical spark/fire, ?;
Ongoing Concerns: Catastrophe Cannot be Contained

- 1,600 gallon spill could not be fully contained
- 27,000 gallon spill likely reached groundwater, penetrated at least 30 feet below tank
- Spill of 1 million gallons = 37 times the 2014 spill
- Each tank holds up to 12.5 million gallons
- We do not know where or how released fuel will flow
- We cannot remediate the aquifer once it has been contaminated
- Catastrophic release will be catastrophic
What Can You Do?

• Join our mailing list for action alerts: www.sierraclubhawaii.org/redhill
• Support City Council Bill 48 (Waters, Cordero)
• Letters NOW to the actual decisionmakers: President Biden, Sec. Def. Lloyd Austin, Sec. Navy Carlos del Toro (see link)
  • DRAIN tanks now, RELOCATE fuel – PAR Pacific, other modern fuel tanks, Navy tankers can take them
  • PERMANENTLY CLOSE the facility
• Need contacts with businesses, community groups, others who may be interested.
• Need national exposure – celebrities, reporters, others
• Join Sierra Club in this work
What Can You Do?

• Join our coalition!
  • Add your logo to our press releases, promote/attend actions and events

Your logo here:
Mahalo nui!

Questions?