

# DEPARTMENT OF HEALTH

## Informational Briefing on U.S. Navy's Fuel Tanks at Red Hill

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Health



Printing Date: Apr. 26, 2007. Updated by: [illegible] Technical Report, Fig. 1-3 Red Hill Storage.mxd

**Figure 1-3**  
**Red Hill Tanks and Surrounding Infrastructure**  
Red Hill Fuel Storage Facility  
Oahu, Hawaii

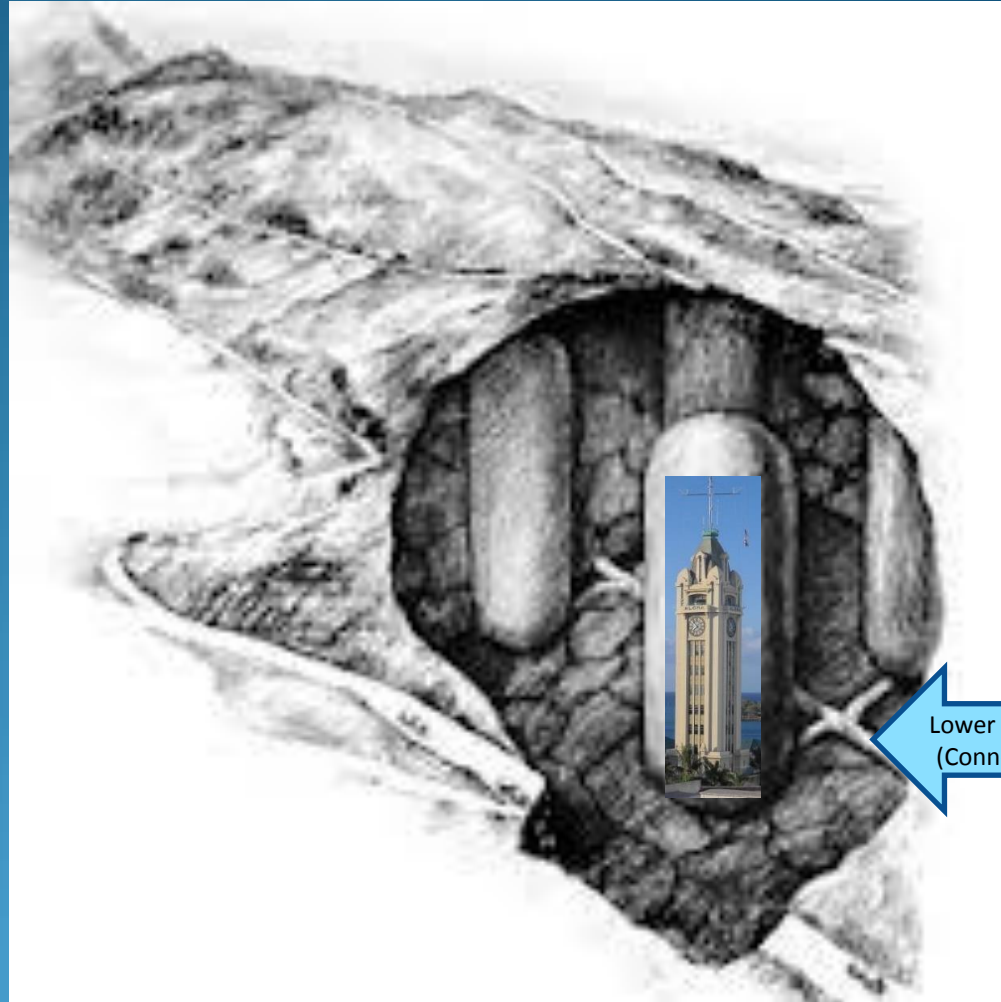


N  
1 inch = ~ 300 feet

Aloha Tower will fit into each of the 20 Red Hill Storage Tank

Each tank can hold 12.6 Million Gallons of fuel

The Tanks were constructed inside of Red Hill from 1940 to 1943



Lower Access Tunnel  
(Connects all tanks)



# Emergency Response Phase

January 13, 2014

- Suspected Release @ Red Hill Storage Tank No. 5
- Facility (est 12,000 gallons) reported to DOH
- Unified Command is activated by DOH & Navy on 1/14
- DOH notifies Honolulu Board of Water Supply
- Navy removes fuel from Tank No. 5 (three days)

Tank No. 5 was out of service for 4 years. Returned to service in December 2013.

# Lower Access Tunnel at Tank No. 5





## Fuel Stain at Tank No. 5



## 2014 Release Red Hill Tank No. 5

- January 13, 2014 suspected release  
(from 12,000 to 20,000 gallons of Jet Fuel unaccounted)
- Increased petroleum vapor levels below tank No. 5
- January 24, 2014 Confirmed Release Notification (CRN)  
(Navy confirms release of up to 27,000 gallons of Jet Fuel)

# Oversight by DOH Programs

- Hazard Evaluation and Emergency Response Office (HEER)
  - Primary State Representative for soil and chemical releases
  - Incorporates Incident Command System (ICS) for emergencies
  - Ensure health and safety of public and response personnel
- Solid and Hazardous Waste Branch (SHWB)
  - Regulates Underground Storage Tanks (UST)
  - Directs remediation of Leaking USTs (LUST)
- Safe Drinking Water Branch (SDWB)
  - Regulates Public Water Systems
  - Ensures that water is safe to drink



# Remediation Phase

- January 31, 2014 Unified Command Finalizes Transition Plan
- DOH HEER transfers oversight to SDWB and SHWB (UST)

# Safe Drinking Water Branch

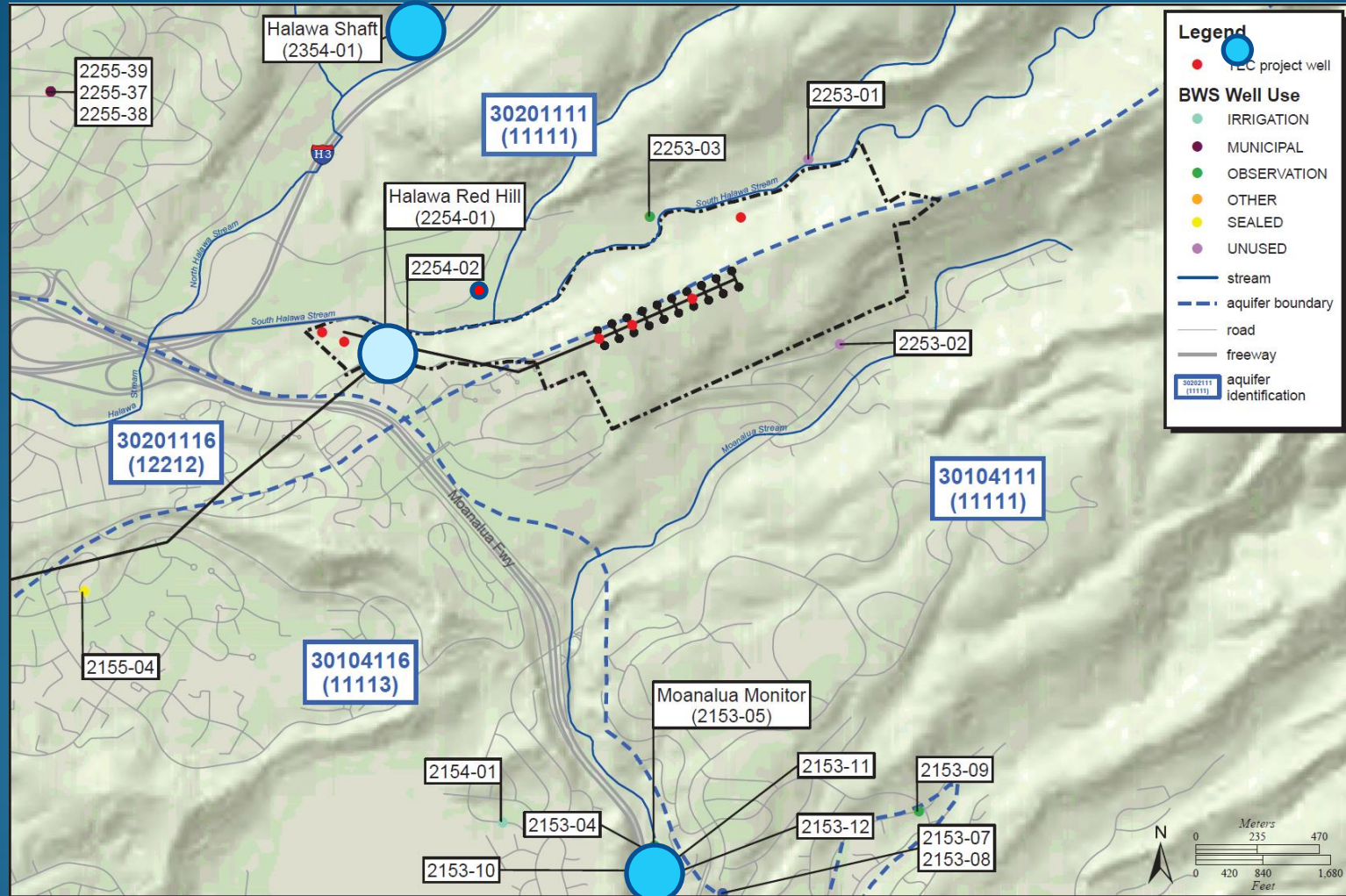
## Follow-up Actions

Coordinating the increased monitoring of drinking water sources in the area by:

- U.S. Navy (Red Hill Shaft)
- BWS (Halawa Shaft, Moanalua Wells, Aiea Wells, Aiea Gulch Well, & Halawa Well)
- DOH (Red Hill Shaft, Halawa Shaft, & Moanalua Well)

**Water Continues to be Safe to Drink**

# Drinking Water Sources near Red Hill Fuel Storage Tanks



**Figure 1-8**  
**Area Wells and Aquifer Systems**

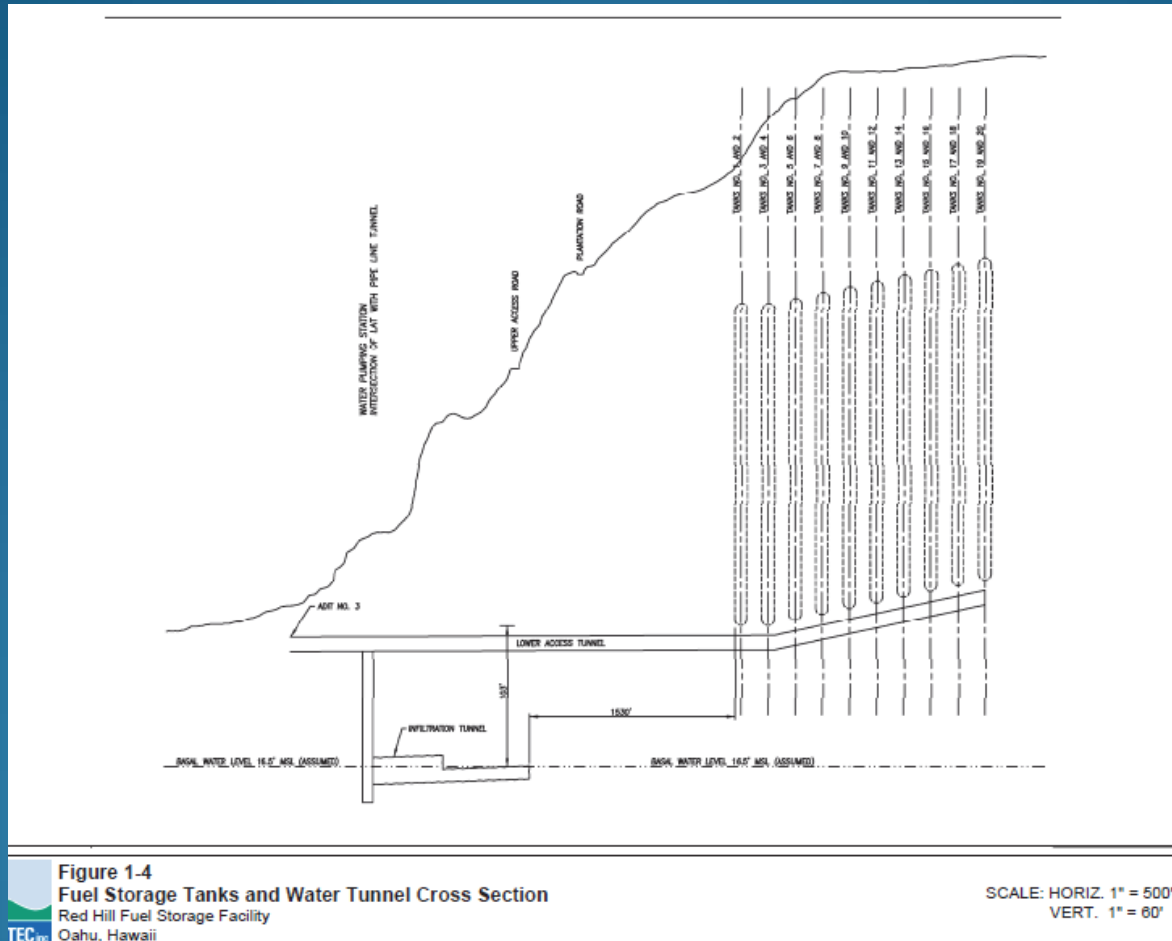
Red Hill Fuel Storage Facility  
Oahu, Hawaii



Source Data:  
City & County of Honolulu,  
GIS base layers  
DLNR Board of Water Supply,  
2005 water supply well IDs



# Proximity of Tank No. 5 to: Red Hill Drinking Water Wells (Navy Wells)



Vertical Distance: 80 to 100 feet  
Horizontal Distance: 1,500 feet

# UST/LUST Program Status In Hawai'i

Cooperative Agreement with EPA since 1986

HAR 11-281 UST Rules amended on August 9, 2013.

Number of active USTs

1,233 at gas stations

320 for emergency generators

46 field constructed tanks

Number of confirmed releases

2,053 (national total: 514,123)

Number of cleanups completed

1,907 (national total: 436,406)



# 10,000 gallon UST Installation



Typical fuel tank at a gas station, installation consists of 2 – 3 tanks

Tanks are prefabricated



# UST Typical Owner & Operator Requirements

1. Design, construction, and installation
2. Notification, permits, and variances
3. General operating requirements (i.e. spill & overflow protection, repairs, recordkeeping)
4. Release detection
- 6. Release reporting, investigation, & confirmation\***
- 7. Release Response Action\***
- 8. Closure\***
9. Financial Responsibility
- 10. Enforcement\***

**\*Federal Statutory Exemption require Field Constructed USTs to comply with only 6, 7, 8 & 10.**

# DOH UST Response

2/3/14 - Navy Initial Release Response report due within 90 days of notification of Confirmed UST Release (April 24, 2014).

2/12/14 - Approved increased monitoring for groundwater, soil vapor, and oil/water.

- Request Preliminary Work Plan (due March 14, 2014) to address
  - movement of free product
  - scanning of basalt to determine area of contamination
  - characterize the extent of contamination

# DOH UST Response (cont.)

2/26/14 – DOH requested additional tasks:

- Schedule for the ventilation of Tank 5 and investigation of the tank interior.
- Address the potential impact of any future releases at the Tank Complex.
- Reserve and increase funding as needed for all phases of the release
- Evaluate the installation of deep monitoring wells to the Northwest and South to serve as sentinel wells for the Board of Water Supply's drinking water pump stations.
- Weekly progress reports by Navy Region Hawaii and NAVSUP FLCPH to DOH UST .



## Red Hill UST Updates by Navy

2/25/2014 – Tank venting contract awarded

3/20 to 4/7/2014 – Tank No. 5 Vented

4/24/2014 – Navy begins visual inspection inside Tank No. 5

5/13/2014 – Inspection of tank floor and lower dome completed

5/27/2014 – Begin inspection of tank walls

6/13/2014 – Navy confirms three holes at the 90-foot elevation

6/20/2014 – Navy confirms a total of fifteen holes

6/27/2014 – Navy confirms two additional holes (Total of 17)

# DOH is Working with the Navy

- To determine the location and full extent of contamination caused by the recent jet fuel release and any prior spills.
- To Evaluate, develop and implement remediation or other corrective measures to recover jet fuel and reduce migration of contamination.

# DOH is Working with the Navy

- To develop additional monitoring wells and/or other measures to track the movement of petroleum releases, especially towards other drinking water sources.
- To prevent the direct contamination of the drinking water aquifer through the lower access tunnel or other pathways.

**Thank You**  
Questions



