

DEPARTMENT OF HEALTH

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

March 7, 2014

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Health

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

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

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

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

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

Each tank can hold 12.5
Million Gallons of fuel

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





Printing Date: Apr. 26, 2007 10:45:05 AM
Project: Red Hill Fuel Storage Facility
Drawing: Technical Report, Fig. 1-3 Red Hill Storage

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



1 inch = ~ 300 feet

UST Typical Owner & Operator Requirements

1. Design, construction, and installation
2. Notification, permits, and variances
3. General operating requirements (ie 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.**

UST Regulatory Oversight

US Navy Red Hill Complex

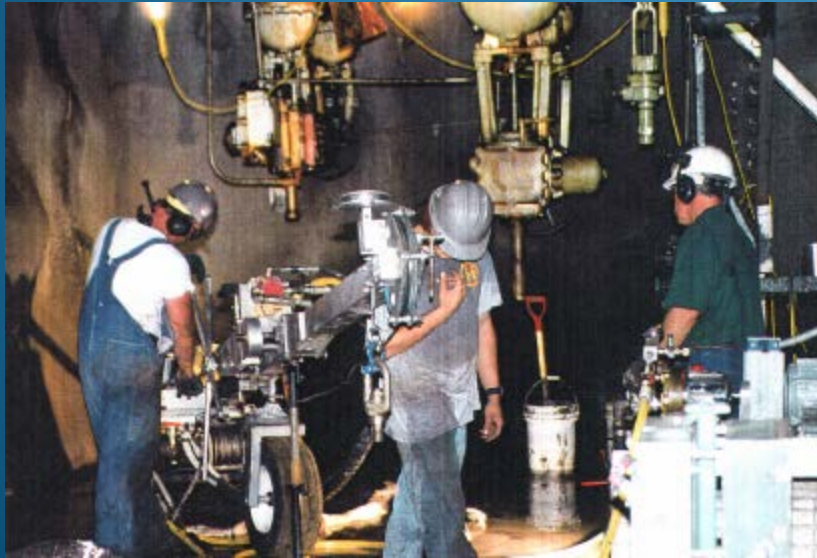
Registration of all USTs to DOH by May 8, 1986

Navy Region Hawaii is the owner of the Red Hill Tank complex and Naval Fuel Supply is the operator

UST Regulatory Oversight US Navy Red Hill Complex

Release Investigations 1998 – 2002

Basalt Cores taken from under each tank



Red Hill Bulk Fuel Storage Facility, Initial Phase II Site Characterization Report
Date: March 1999

Section: 4
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Figure 4-7 Petroleum Stained Core – B16C, 49' to 60'

UST Regulatory Oversight

US Navy Red Hill Complex

Confirm Release Notifications (CRN)

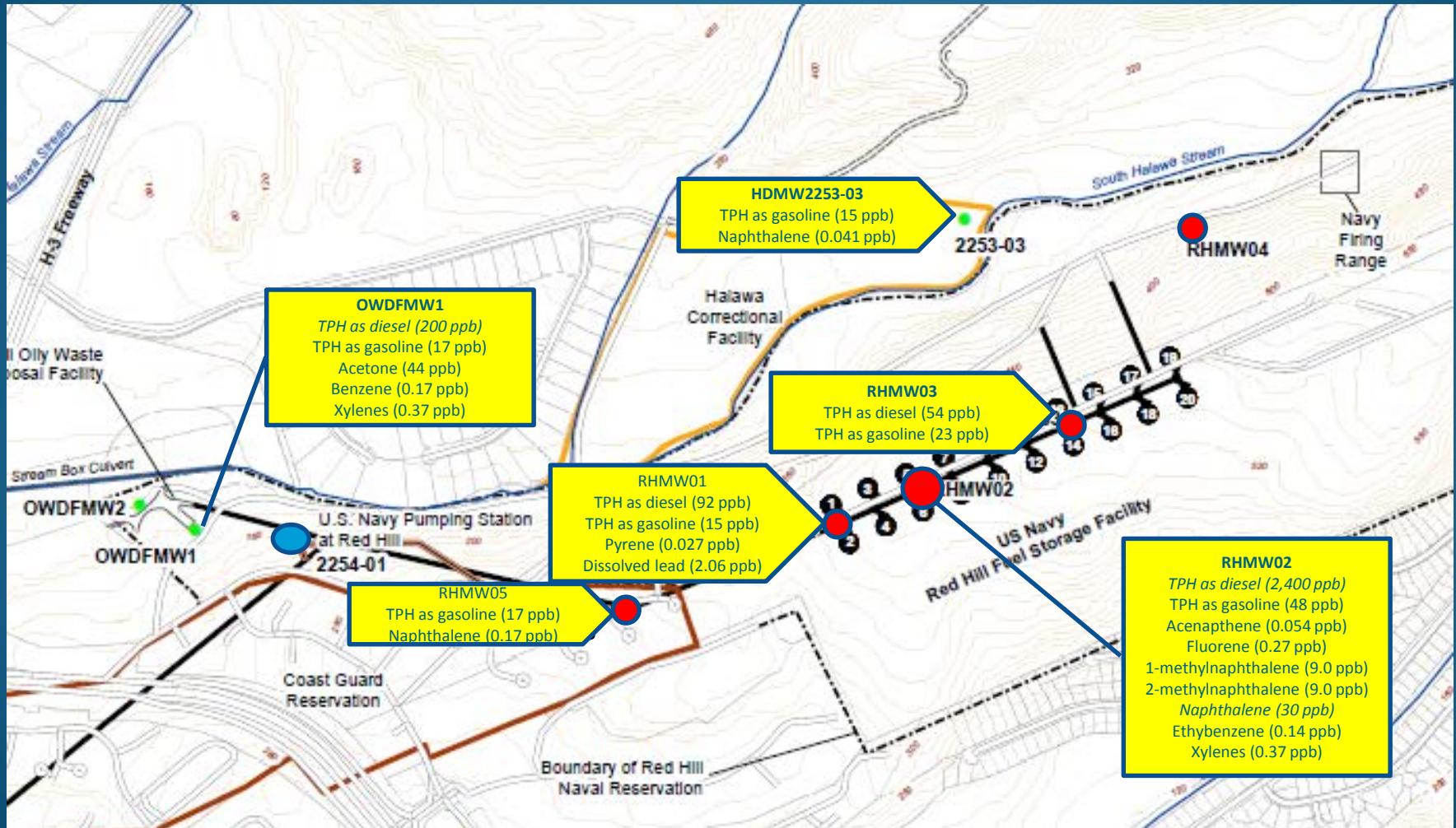
1998 – Initial Basalt Cores confirm past releases

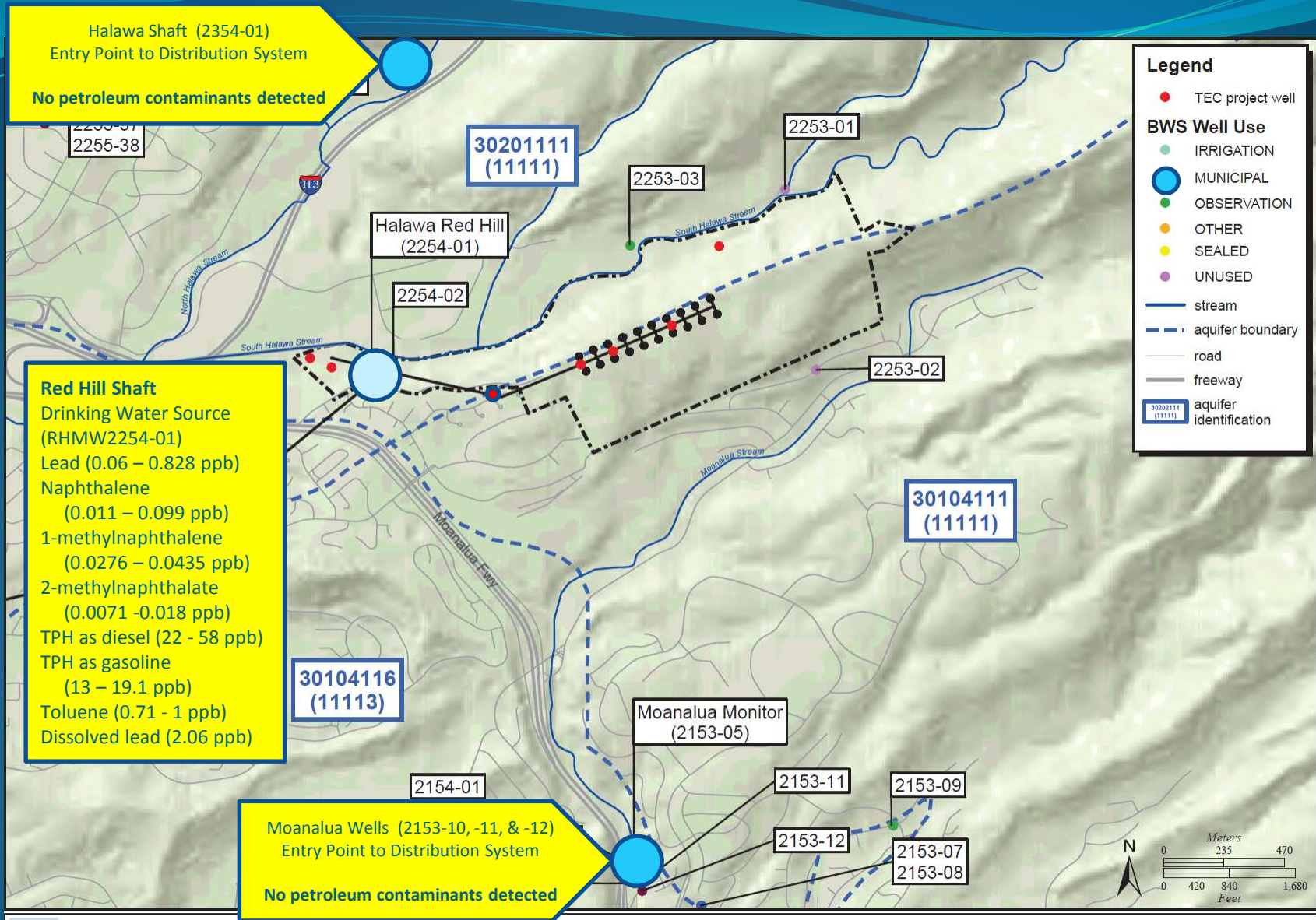
Navy Estimate Historical Release(s) of up to
1.2 MG of fuel

2002 – Basalt cores from under each tank confirm
releases for the entire Red Hill Complex
(19 of 20 tanks)

UST Regulatory Oversight US Navy Red Hill Complex

Construction of 5 Groundwater Monitoring Wells 2005 – 2009
(Sampling results from October 22-23, 2013)





Drinking Water Monitoring Results

RHMW 2254-01

contaminant	Detected range	Detected dates	Health advisory level
1-methylnaphthalene	0.0276 – 0.0435 ppb	2008	4.7 ppb (DOH EAL)
2-methylnaphthalene	0.0071 – 0.018 ppb	2005 – 2009	10 ppb (DOH EAL)
lead, dissolved	0.02 – 3.3 ppb	2005 – 2011	15 ppb (drinking water action level)
lead, total	0.06 – 0.828 ppb	2005, 2012, 2013	n/a
naphthalene	0.011 – 0.099 ppb	2005 – 2014	17 ppb (DOH EAL)
toluene	0.71 – 1 ppb	2005, 2012	1000 ppb (drinking water MCL)
TPH-d	22 – 58 ppb	2005, 2013	100 ppb (DOH EAL)
TPH-g	13 – 19.1 ppb	2009, 2012	100 ppb (DOH EAL)

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)

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 .

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

<http://health.hawaii.gov/shwb/underground-storage-tanks>