Located east of Pearl Harbor, Hawaii, the U.S. Navy’s Red Hill Facility provides fuel for military operations in the Pacific. Originally constructed in the 1940s inside the hills of Oahu and able to store up to 250 million gallons of fuel in 20 steel-lined concrete underground tanks, the Facility sits above a source of drinking water. In January 2014 the Navy reported a 27,000 gallon leak of fuel. In 2015 EPA, the State of Hawaii and Navy and Defense Logistics Agency reached a comprehensive enforceable agreement, or Administrative Order on Consent, requiring the Navy to perform environmental and infrastructure work.

**Milestone In Focus**

**Administrative Order on Consent (“AOC”)**

The AOC requires the Navy to ensure the groundwater resource is protected. Tanks storing fuel must be upgraded by the AOC deadline or they will be removed from service until they are upgraded. EPA and the State of Hawaii have already approved the Navy’s plan for improved tank maintenance.

**Environmental**

- **Installation of New Monitoring Wells**
  Up to 8 new monitoring wells installed to further understanding of groundwater.

- **Groundwater Flow Model**

- **Investigation and Remediation of Releases**
  Report detailing the extent and remedial options for the 2014 release: Due Q4.

**Public Engagement**

- **Public Workshop**
  Navy explains study of tank upgrade alternatives. Q1

- **Public Meeting**
  EPA and State of Hawaii seek public input on Navy’s tank upgrade proposal. Planned Q3

- **House Armed Services Committee Briefing**
  Joint briefing before Congressional committee. Q4

**Milestone In Focus**

**Tank Upgrade Proposal**

The Navy’s proposal will be based on results from other work completed under the AOC and input from key stakeholders. Potential upgrades may be simple or complex, and could vary widely in cost. All upgrade decisions are subject to EPA and State of Hawaii approval.

**Infrastructure**

- **Alternative Storage Locations**
  An investigation of other potential locations to store fuel that supports Pearl Harbor. Due Q1

- **Tank Release Detection**
  Tests to evaluate advancements in leak detection technology. Due Q2

- **Tank Upgrade Proposal**
  A proposed upgrade alternative to retrofit the facility’s tanks. Due Q3

- **Risk Assessment**
  Quantitative study to infer the risk and probability of uncontrolled fuel releases from the facility. Due Q4

**2018**

**2019 - 2020**

**2021 & after**

**Environmental**

- **Groundwater Fate and Transport Modeling**
  A report on contaminant degradation and movement around the facility. Q3 2019

- **Groundwater Monitoring Well Network Plan Update**
  Final report on the existing and future monitoring well network serving the Red Hill Facility. 2020

**Public Engagement**

- **Public Meeting**
  EPA and State seek public input on AOC progress. Planned Q3 2019 & Q3 2020

**Milestone In Focus**

**Groundwater Fate and Transport Modeling**

Examines existing and potential contaminant movement in the environment utilizing understanding of geology, contaminant degradation, and groundwater flow.

**Infrastructure**

- **Tank Corrosion Study**
  An evaluation of Navy’s tank inspection techniques. Q2 2019

- **Risk Assessment Update**
  Potential revision to risk assessment that incorporates groundwater understanding. 2020

**Environmental**

- **Groundwater Protection Plan Update**
  An updated plan that includes release response procedures and risk based action levels. Q3 2021

**Public Engagement**

- **Public Meetings**
  EPA and State of Hawaii must seek public input. Q3/Annually

**Milestones In Focus**

**Groundwater Protection Plan Update**

Details actions triggered in response to possible contamination migrating from the facility towards any drinking water well.

**Tank Upgrade Deadline**

Any large tanks not upgraded by the AOC deadline must be removed from service until they receive an upgrade.
Oversight of the Red Hill Facility

Current Regulations on FCTs
(HAR 11-281)
- Design & construction requirements for tank and piping (corrosion protection)
- Release reporting, investigation, and confirmation
- Release response action
- Closure and change-in-service

Proposed Regulations version 12.2017
Estimated effective date - October 2018
(HAR 11-280.1)
- By 2018
  - Secondary containment & interstitial monitoring or approved alternative design and release detection for all newly constructed FCTs
- By 2021
  - UST system permitting & notification
  - Spill & overfill control
  - Compatibility
  - Reporting & recordkeeping
  - Equipment repair, testing & maintenance
  - Walkthrough inspections
  - Release detection
  - Financial Responsibility
  - Operator Training

The Administrative Order on Consent
Aggressively Regulates Red Hill

Effective date - September 28, 2015
Requires Regulatory Evaluation and Approval of...
- Tank Upgrade (every 5 year interval)
- Improvements to Tank Maintenance Protocols
- Facility Specific Leak Detection Methods
- Corrosion Evaluation Methods
- Non-Destructive Testing Evaluation Procedures
- Operating Protocols including Response to Alarms
- Environmental Assessments including Contaminant Transport Modeling monitoring well network installation
- Updates to Contingency Plans & A Qualitative Risk Assessment Plan

Additional advantages of the AOC over the rules

Local Participation
- Requires opportunity for public participation annually
- Involves local subject matter experts & local stakeholders

Tangible Results
- Requires immediate changes to training, operational procedures (e.g. filling procedures) & response to alarms
- Increase frequency of tank tightness testing
- Evaluation & selection of better, redundant release detection methods
- Deadline when tanks without approved upgrade will not be allowed to operate