

Red Hill Bulk Fuel Storage Facility ~ Administrative Order on Consent (AOC) Update

Department of Health

September 21, 2021

Commission on Water Resource Management Meeting

Work Under the AOC and the Statement of Work (SOW)

- ❖ Tank Inspection, Repair, and Maintenance (TIRM)
- ❖ Tank Upgrade Alternatives (TUA)
- ❖ Release Detection (RD) and Tank Tightness
- ❖ Corrosion and Metal Fatigue Practices
- ❖ Investigation and Remediation of Releases
- ❖ Groundwater Protection and Evaluation
- ❖ Risk/Vulnerability Assessment

Tank Inspection, Repair, and Maintenance (TIRM)

- ❖ March 2020: Tank 5 brought back to service after the January 2014 release
- ❖ Currently: Tanks 13, 14, 17 & 18 undergoing Clean, Inspect and Repair (CIR) process
- ❖ Semiannual Tank Tightness Tests – all active tanks have passed

Tank Upgrade Alternatives (TUA)

<https://www.epa.gov/red-hill/tank-upgrade-alternatives-red-hill>

Release Detection (RD)

- ❖ September 2019: Navy submitted “Red Hill Bulk Fuel Storage Facility Administrative Order on Consent Tank Upgrade Alternatives and Release Detection Decision Document”
- ❖ October 2020: Regulators responded with “Notice of Deficiency for the Tank Upgrade Alternatives Decision Document and New Release Detection Alternatives Decision Document, for Red Hill Administrative Order on Consent Statement of Work Sections 3.5 and 4.8” (NOTICE OF DEFICIENCIES) requesting additional information for Navy selection and justification of Best Available Practicable Technology (BAPT)
- ❖ August 2021: Navy submitted “Supplement to Red Hill Bulk Fuel Storage Facility Administrative Order on Consent Tank Upgrade Alternatives and Release Detection Decision Document” (SUPPLEMENT)

<https://www.epa.gov/system/files/documents/2021-08/red-hill-tank-upgrade-alternatives-release-detection-supplement-2021-08-19.pdf>

Tank Upgrade Alternatives SUPPLEMENT

Release Detection SUPPLEMENT

- ❖ Regulators are currently reviewing the SUPPLEMENT (excerpts below)
- ❖ Executive Summary, pages 7-8: “As described in this TUA Supplement, the only alternative that meets BAPT requirements today is Alternative 1A. The other alternatives do not meet the BAPT requirements. The TUA Report, TUA Decision Document, and this Supplement demonstrate how the multiple release prevention, detection, and mitigation measures included within Alternative 1A are the best technologies that can be employed today to protect the environment, particularly groundwater and drinking water.”
- ❖ Section 5.2.1, page 34: “The secondary containment technology that the Navy is currently evaluating is used on tanker ships up to five times the size of the Red Hill fuel tanks. The technology is designed to withstand very harsh environments present during open-ocean transits. The feasibility study is scheduled for completion in 2021, and the results of this effort will be included in the next TUA decision document.”
- ❖ Section 5.3.1, page 36: “By July 15, 2045, the Navy intends to upgrade all Red Hill tanks with secondary containment, including an inner and outer barrier with an interstitial space that is monitored for releases. If a feasible and reliable secondary containment alternative becomes available and practicable prior to that date, it will be evaluated in a future 5-year TUA decision review cycle and implemented if warranted. However, secondary containment is an additional commitment above and beyond the current BAPT decision recommendation. The Navy remains committed to the AOC and will implement this and future BAPT decisions for all Red Hill fuel tanks by the AOC deadline of 2037.”

Tank Upgrade Alternatives SUPPLEMENT

Release Detection SUPPLEMENT

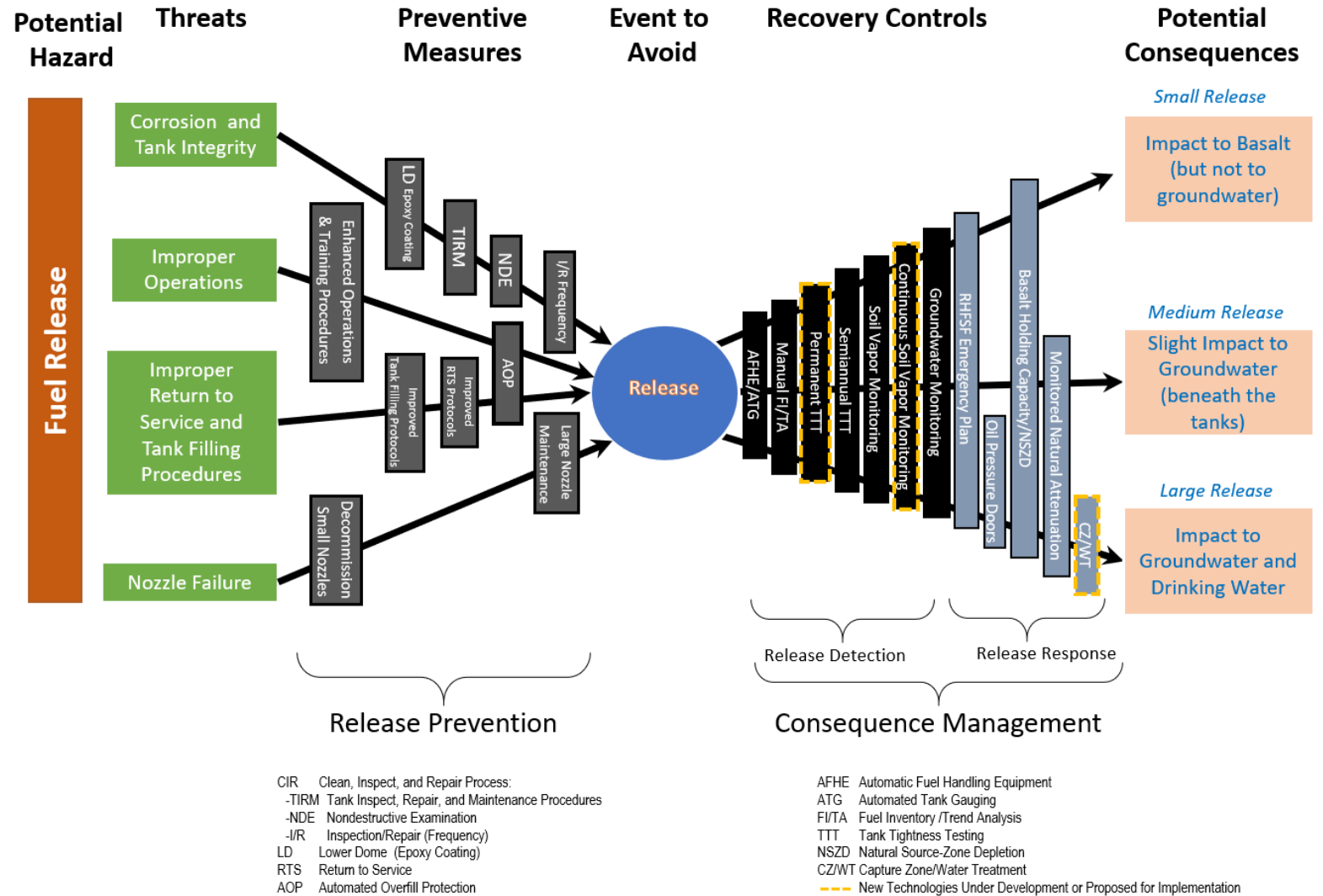


Figure 2: Bow-Tie Diagram for Alternative 1A – Environmental Risk Management (Section 4.2.5, page 32)

Corrosion

- ❖ July 2019: Navy submitted **DESTRUCTIVE TESTING RESULTS REPORT** which attempted to show the correlation of the scanning process compared to what was observed when metal coupons were removed
- ❖ March 2020: Regulatory Agencies' **DISAPPROVAL** letter challenged the conclusions of the report and required additional studies for improvements
- ❖ December 2020: Navy submitted **5.4 EXECUTION PLAN** which details the 10 additional studies the Navy will perform to improve their efforts to prevent, identify and remedy any corrosion
- ❖ May 2021: Regulators provided Navy "Preliminary Review and Request for Revised or Supplemental Scope of Work for Section 5.4 Execution Plan Decision.
- ❖ August 2021: Navy submitted "Section 5.4 **EXECUTION PLAN Decision on Need for and Scope of Modified Corrosion and Metal Fatigue Practices AMENDMENT #1**"

Investigation and Remediation of Releases & Groundwater Protection and Evaluation

- ❖ March 2020: Navy submitted INVESTIGATION AND REMEDIATION OF RELEASES REPORT (IRR) detailing efforts made to investigate and remediate the January 2014 release and future releases.
- ❖ March 2020: Navy submitted GROUNDWATER FLOW MODEL REPORT.
- ❖ **September 27, 2021 (tentative): Next Groundwater Flow Modeling Working Group meeting**

Groundwater Protection and Evaluation: Groundwater Monitoring Well Network

- ❖ Navy has added the following monitoring wells:
 - 2019: 3 - RHMW₁₄, RHMW₁₅, RHMW₁₃
 - 2020: 2 - RHMW₁₂ & RHMW₁₉
 - 2021: 3 - RHMW_{1R}, RHMW_{12-A}, RHMW₁₆, RHMW_{16-A}
- ❖ 27 total existing monitoring wells
- ❖ 18 wells were monitored in the latest GW monitoring report
- ❖ **6 wells to be drilled - RHMW 17, 18, 20, 21, 22 & 23**

Risk Assessment

- ❖ November 2019: Navy submitted SECOND PHASE OF RISK ASSESSMENT SCOPE OF WORK. The first phase addressed internal risk events while this next phase will address:
 - Internal and External Fire and Flooding Initiating Events
 - Seismic Initiating Events
 - And Other External initiating Events
- ❖ October 2020: Regulators respond with “NOTICE OF DEFICIENCIES AND OPPORTUNITY TO CURE” letter listing additional work need for the Phase 2 SOW
- ❖ December 2020: Navy submitted Phase 2 SOW
- ❖ **September 2, 2021: Regulators respond with “Notice of Deficiencies – Section 8.2 Risk/Vulnerability Assessment Phase 2 Scope of Work, dated December 23, 2020”**

Other Updates

- ❖ March 2020: Hotel Pier Release
 - Release Response activities are being followed
- ❖ May 6, 2021: May 6 Release
 - Investigation and causative research studies TBA
- ❖ July 16, 2021: Kilo Pier Release
 - Release Response activities are being followed

Community Involvement and Meetings

- ❖ Fuel Tank Advisory Committee (FTAC) meetings increased from annual to semiannual
 - **Next meeting: Thursday, October 28, 2021**
 - Previous meetings: October 17, 2019; October 30, 2020; and May 20, 2021
- ❖ 2021: For first three quarters Navy provided updates via audiocasts due to COVID-19 restrictions.
- ❖ 2022: In the first quarter, pending Governor approval, Navy plans to host an in-person meeting/workshop

<https://health.hawaii.gov/shwb/red-hill-task-force-meetings-2014/>

Websites

- ❖ DOH

<https://health.hawaii.gov/shwb/ust-red-hill-project-main/>

- ❖ EPA

<https://www.epa.gov/red-hill>

- ❖ Navy

<https://www.cnic.navy.mil/regions/cnrh/om/red-hill-tank.html>