



**UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY  
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**STATE OF HAWAII  
DEPARTMENT OF HEALTH  
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February 17, 2023

Rear Admiral Stephen Barnett  
Commander, Navy Region Hawai'i  
U.S. Navy Region Hawai'i  
850 Ticonderoga St, Ste. 110  
Pearl Harbor, HI 96860-5101  
(Sent via Electronic Mail)

**Subject: Clarification of Scope Required by 2015 Red Hill Administrative Order on Consent and Schedule for Consolidated Environmental Scope of Work Red Hill Bulk Fuel Storage Facility**

Dear Rear Admiral Barnett:

The U.S. Environmental Protection Agency (EPA) and Hawai'i Department of Health (DOH), collectively the "Regulatory Agencies," submit this letter to clarify the scope required by the 2015 Red Hill Administrative Order on Consent (2015 AOC) and generally identify the current collective soil and groundwater release response assessment work, which the Regulatory Agencies required pursuant to the 2015 AOC, DOH Notice of Interests, DOH Emergency Order, chapters 128D and 342L Hawai'i Revised Statutes, chapters 11-451 and 11-280.1, Hawai'i Administrative Rules, Groundwater Protection Plan (interim update August 2014) and joint agency-approved plans.

Section 1(b) of the 2015 AOC requires Navy and DLA to address the investigation and remediation of all past releases and any future releases "of petroleum or other substances" at the Red Hill Bulk Fuel Storage Facility (Facility). Documented releases that must be addressed pursuant to the 2015 AOC include but are not limited to the January 2014 release of jet fuel, the May 2021 and November 2021 releases of jet fuel, and the November 2022 release of Aqueous Film Forming Foam (AFFF) concentrate.

The collective soil and groundwater assessment work required across the above authorities includes but is not limited to the following:

- Photoionization detection (PID) screening and conditional sampling and analysis of soil vapor (SV) via monitoring probes (MPs) under the Red Hill fuel tanks and reporting of results. Current requirements are weekly PID screening at 47 SVMPs and monthly sampling at 8 SVMPs.
- PID screening and conditional sampling and analysis of SV sub-slab pins and deep SVMPs at Adit 3 and reporting of results. Current requirements are weekly SV monitoring at 54 locations and monthly sampling at 3 deep SV monitoring probes.
- Sampling and analysis of groundwater wells associated with the Facility and reporting of results. Current requirements are weekly sampling for TPH, VOCs, PAHs, and other analytes at approximately 24 locations, quarterly sampling for TPH, VOCs, PAHs, fuel additives, lead scavengers, natural attenuation parameters (NAPs), and general chemistry at 23 locations, and weekly sampling for per- and polyfluorinated substances (PFAS) at 11 locations. In addition, the November 20, 2021 release's site characterization efforts include weekly sampling of newly drilled and installed plume delineation wells for TPH, VOCs, PAHs, NAP, and other geochemical parameters.
- PID screening of well headspace, groundwater level monitoring, and identification of free product (FP) presence in all wells with weekly and quarterly frequencies and reporting of results.
- Expansion of the Red Hill groundwater monitoring well network. A minimum of 22 new wells are planned to be installed in 2022 and 2023, in accordance with the September 2, 2022 Work Plan conditionally approved by the Regulatory Agencies on September 29, 2022. The additional wells include "sentinel wells" intended to better evaluate the threat to regional water supply sources.
- Continued development of a site conceptual model and groundwater flow and contaminant fate and transport models, including any modeling of contaminant transport in the vadose zone.
- Investigation, characterization, and remediation work targeting (but not limited to) documented past releases, including the May and November 2021 fuel releases:
  - Removal of FP or the non-aqueous phase liquid regulated substance from Red Hill Shaft using adsorbents, skimming, and other techniques. This work began in December 2021 and will continue as long as needed.
  - Extraction and treatment of groundwater from Red Hill Shaft. This work began in January 2022. The U.S. Department of the Navy (Navy) is planning a study to be completed in 2023 to optimize and potentially reduce groundwater extraction rates. During the Red Hill Shaft (RHS) Granular Activated Carbon (GAC) unit operation, effluent groundwater discharge in the Halawa stream is continuously monitored (water quality samples) for analysis of the Hawai'i Administrative Rules 11-55 Appendix D Table 34.2 analytes, including TPHs, PAHs, VOCs, SVOCs, and other water quality parameters.
  - Efforts to characterize and remediate contaminated materials in and near Adit 3. Characterization work has included FP, soil, soil gas, and groundwater sampling. Remediation work has included the removal of FP and contaminated soil. The Navy is proposing a pilot-scale remediation study for the removal of volatile hydrocarbons by phase transfer and enhanced biodegradation from Adit 3 to be

conducted in 2023. Adit 3 work began in November 2021 and is expected to continue.

- Investigation, characterization, and remediation work targeting the November 2022 AFFF release. This includes, but is not limited to:
  - Efforts to characterize and remediate soil and other contaminated materials in and near Adit 6. Remediation work to date has included removal of contaminated soil (approximately 150 cubic yards), asphalt, and concrete. This work began in December 2022 and is expected to continue.
  - Soil and Groundwater sampling for PFAS and other parameters that may indicate the presence of AFFF related compounds in the environment, as described above. This work began in November 2022 and is expected to continue.
- Revisions to the Investigation and Remediation of Releases (IRR) Report, which, among other things, evaluates alternatives for further remediation of past releases. The Regulatory Agencies will respond to the draft IRR Report in 2023.
- Development of a proposed IRR Decision Document identifying a preferred alternative and implementation of the Decision Document. The Regulatory Agencies will determine the timing of these actions in its response letter on the draft IRR Report expected in 2023.

Section 1.1 of the 2015 AOC Statement of Work (SOW) (Subject Matter Expert Involvement) requires continued efforts to seek technical advice from, and provide periodic updates to, subject matter experts including the Honolulu Board of Water Supply, the Hawai'i Department of Land and Natural Resources (including the Commission on Water Resources Management), and the U.S. Geological Survey. The Regulatory Agencies acknowledge that the Red Hill Remediation and Restoration Action Plan Roundtable (Roundtable) meetings and related Groundwater Subject Matter Expert meetings are venues for this involvement.

Section 1.2 of the 2015 AOC SOW (Community Involvement) provides the Parties shall host public meetings at least annually, and "Parties shall update the public jointly based on public interest and at the request of the Parties." Given the intense public interest surrounding the November 2021 and November 2022 releases, the Regulatory Agencies request the Parties provide quarterly meetings, such as open house events, to update the public on the status of environmental work and other activities occurring at the Facility, and to provide opportunities for the public to ask questions about or comment on the work being performed.

Due to public interest, the Regulatory Agencies also request that the Navy and DLA complete the following:

- Make available on a publicly accessible website redacted versions of all submittals and deliverables within ten business days of providing the redacted deliverable or submittal to the Regulatory Agencies, consistent with the requirements of Section 10(d) of the 2015 AOC (Document Availability), which provides that data and site conditions are not privileged.
- Make environmental data generated available to the public in an electronic form approved by the Regulatory Agencies within ten business days of both unvalidated and validated data becoming available. Post-validation changes in analytical results shall be described and documented via reporting requirements, for example, Release Response

Reports under HAR § 11-280.1-65.2.

Section 1.3 of the 2015 AOC SOW (Meetings) requires:

- Preparing and distributing for discussion at Environmental Coordination meetings, AOC Principal Calls, and Roundtable Meetings, a consolidated work schedule for all environmental work underway or planned over the minimum upcoming 18 months (and regularly updated) with targeted work product submissions and decision dates. Submit this current consolidated work schedule **within ten business days of receipt of this letter** and update no less frequently than quarterly in coordination with the Regulatory Agencies.
- New work items being considered by the Navy should be presented to the Regulatory Agencies prior to final contracting or commencement of any such projected projects showing impacts on the consolidated work schedule.

In light of the Navy's decision to shut down and defuel the Facility, and the issuance of the DOH's May 6, 2022 Emergency Order, the Regulatory Agencies agree that the work required by the following sections of the 2015 AOC is no longer required. These sections include:

- Tank Inspection, Repair and Maintenance (Section 2 of the 2015 AOC SOW);
- Tank Upgrade Alternatives (Section 3 of the 2015 AOC SOW);
- Corrosion and Metal Fatigue Practices (Section 5 of the 2015 AOC SOW); and
- Risk/Vulnerability Assessment (Section 8 of the 2015 AOC SOW).

After the 2023 Consent Order becomes effective, Release Detection/Tank Tightness Testing will no longer be required by Section 4 of the 2015 AOC SOW.

Please confirm the Navy agrees with the Regulatory Agencies' interpretation of the scope of the 2015 AOC, summary of the current soil and groundwater release response assessment work occurring at the Facility, and reduction of tasks by AOC SOW sections, as described in this letter. We look forward to the Navy's participation in our Roundtable meetings, increased dissemination of information to the public through website updates and quarterly public meetings, and submission of a consolidated schedule for environmental work.

If you have any questions, please contact Grant Scavello, EPA Interim Red Hill Project Coordinator at (415) 972-3556 or Kelly Ann Lee, DOH Red Hill Project Coordinator at (808) 586-4226.

Sincerely,



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U.S. Environmental Protection Agency, Region 9

Kelly Ann Lee  
Red Hill Project Coordinator  
State of Hawai'i, Department of Health

Rear Admiral Stephen Barnett

February 17, 2023

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cc: Donald Panthen, Red Hill Program Management Office Director, Navy Region Hawai'i  
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