UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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STATE OF HAWAII
DEPARTMENT OF HEALTH
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February 12, 2024

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

Subject: Review of:

- *Response to Comments on Site Characterization Plan Addendum, Collection, Hold, and Transfer Tank Overflow Site Characterization*, received December 12, 2023
- *Site Characterization Plan Addendum, Collection, Hold, and Transfer Tank Overflow Site Characterization,* received January 11, 2024

Dear Rear Admiral Barnett:

Thank you for submitting the *Response to Comments on Site Characterization Plan Addendum, Collection, Hold, and Transfer Tank Overflow Site Characterization* (RTCs), on December 12, 2023, and the revised *Site Characterization Plan Addendum, Collection, Hold, and Transfer Tank Overflow Site Characterization* (Revised Work Plan), on January 11, 2024. The Hawai‘i Department of Health (DOH) and U.S. Environmental Protection Agency (EPA), collectively the Regulatory Agencies (RAs), have reviewed the RTCs and Revised Work Plan. Since the RAs reviewed the initial work plan (titled *Site Characterization Plan Addendum, Collection, Hold, and Transfer Tank Overflow Site Characterization, November 2021 Release, Red Hill Bulk Fuel Storage Facility*, dated November 2022) and submitted comments, the U.S. Department of the Navy (Navy) also provided additional information about per- and polyfluoroalkyl substances (PFAS) contamination near Adit 3 that should be considered during the pending subject investigation. The RAs' evaluation of the RTCs and comments on the Revised Work Plan are enclosed. Please address the enclosed comments within 30 calendar days of receipt of this letter.

If you have any questions regarding this letter, please contact Matthew Cohen, EPA Red Hill Project Coordinator, at Cohen.Matthew@epa.gov or (415) 972-3691; or Kelly Ann Lee, DOH Red Hill Project Coordinator, at KellyAnn.Lee@doh.hawaii.gov or (808) 586-4226.

Sincerely,

Digitally signed by Cohen, Matthew
Date: 2024.02.13 11:09:55 -08'00'

Digitally signed by Kelly Ann Lee
Date: 2024.02.13 10:52:52 -10'00'

Matthew Cohen PG
Red Hill Project Coordinator
U.S. Environmental Protection Agency, Region 9

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

Enclosure: Regulatory Agency Comments

cc by email only:

RDML Marc Williams, Deputy Commander, Navy Closure Task Force – Red Hill
Sherri Eng, Executive Director, Navy Closure Task Force – Red Hill
Milton Johnston, Environmental Director, Navy Closure Task Force – Red Hill
Joshua Stout, ACO/AOC Portfolio Manager, Navy Closure Task Force – Red Hill
Brandon Gosch, Assistant Regional Engineer, Navy Region Hawai‘i
CAPT James Sullivan, Commanding Officer, NAVFAC Hawai‘i
CDR Benjamin Dunn, Red Hill Environmental OIC, NAVFAC Hawai‘i
LCDR Travis Myers, Aquifer Recovery Team Lead, NAVFAC Hawai‘i

Many of the comments in our October 6, 2023 letter were either adequately addressed or acknowledged in the RTCs. However, there are several RTCs that warrant a response from the RAs; these are addressed below.

1. **Response 11 (Section 2.3 (b)):** Rather than removing the conflicting text about cleaning agents being used after the May 2021 release, this information should be replaced with the types and amounts of cleaning agents used. Cleaning agents used in the tunnel are still relevant to this investigation, whether they were used historically or in response to the May 2021 and November 2021 releases.

2. **Responses 20 to 24 (Section 5.2.1 (a)):** Please analyze all soil samples for the analytes and methods specified in the October 6, 2023 letter. In addition, please analyze all soil and water samples, and sludge samples from the frac tanks, for PFAS via EPA Method 1633. Please use a Coliwasa to sample sludge and liquids in the frac tanks.

   The fuel that flowed into the sanitary sewer sump in Adit 3 may have come into contact with other contaminants (e.g., any liquids in the aqueous film forming foam [AFFF] piping system, contaminants present on the Adit 3 tunnel floor, the sanitary sewage itself) or PFAS potentially present in the fuel released (the fuel samples collected from the underground storage tanks were not analyzed for PFAS). In addition, PFAS detected in groundwater near Adit 3 and south of the freeway during the September 2023 Baseline Sampling Event (which exceeded EPA Regional Screening Levels and proposed Maximum Contaminant Levels) are longer-chain PFAS compounds more commonly associated with legacy AFFF releases, distinctly different from the short-chain PFAS associated with the AFFF-concentrate release at Adit 6 November 2022.

In addition, the RAs have the following comments on the Revised Work Plan.

3. **Section 1.0, Page 1:** It is stated that during the November 20, 2021 release, JP-5 jet fuel flowed down the Adit 3 tunnel and into the sanitary sewer sump, and that during heavy rains, the contents from this sump were pumped into the collection, hold, and transfer (CHT) tank, which subsequently overflowed. As we were not initially aware that the discharge from the CHT tank contained anything other than rainwater and sewage, please describe the line(s) that discharged into or other routes for solids or liquids to enter the Adit 3 sanitary sewer sump/CHT tank, the potential sources of waste, and potential types of contamination that may be present.

4. **Section 2.3, Page 4:** During the initial stage of an investigation into a release, the results are to be preliminarily screened against the most conservative RSLs and DOH Tier 1 Environmental Action Levels (EALs) for unrestricted land and water uses for all potential

hazards and exposure routes (e.g., leaching, vapor intrusion, direction exposure, gross contamination, terrestrial ecotoxicity) to determine the list of contaminants of potential concern (COPCs). Following complete delineation of the release, an Environmental Hazard Evaluation should be prepared that screens current and potential future human health and environmental risks. Table 2-2 should be revised to include the most conservative Tier 1 EAL (unrestricted land use where groundwater is a potential drinking water source, and the nearest surface water body is within 150 meters) for screening contaminant detections and identifying COPCs. Please refer to Table A-2 of the Fall 2017 DOH EAL Surfer at https://health.hawaii.gov/heer/files/2019/11/HDOH-EAL-Surfer-Fall-2017.xlsx.

5. **Section 5.1, Page 6:** It is recommended that decision unit 1 (DU1) be broken into two decision units (DUs) to create a primary spill DU (immediately adjacent to the CHT tank) and a bounding DU (at least towards the north). If contaminants of interest (COIs) are detected above screening levels in the soil samples collected from DU1, additional lateral and vertical delineation may be necessary.

6. **Section 5.1.1, Page 8:**
    a. A near surface multi increment (MI) soil sample is proposed to be collected just below the asphalt at an estimated depth interval of 1 to 1.5 feet (ft) below ground surface (bgs) and a shallow subsurface MI soil sample is proposed to be collected at a depth interval of 2.5 to 3 ft bgs. An additional shallow subsurface MI soil sample is to be collected from a depth interval of 1.5 to 2.5 ft bgs. If an additional shallow subsurface MI soil sample is not collected from 1.5 to 2.5 ft bgs and COCs are detected at concentrations above the DOH EALs and/or EPA RSLs in the near surface soil MI soil sample, then it must be assumed COCs are present at concentrations above the DOH EALs and/or EPA RSLs to at least 2.5 ft bgs since there will be no data available between 1.5 to 2 ft bgs.

    b. The last paragraph on the page indicates: *"If soil contamination is observed at the vertical or lateral extent of the proposed limits, the Navy will consider additional step-out borings in a second characterization phase."* Due to the proposal of only two lateral DUs, if a COPC is detected at a concentration above the DOH Tier 1 EAL or EPA RSL, additional delineation will be required through the use of step-out DU(s).

7. **Section 6.3, Page 18:** If the laboratory deliverables for the frac tank characterization are used to estimate the amount of JP-5 that was recovered in the frac tanks, then these deliverables (Level 2 reports and electronic data deliverables) need to be uploaded to the Environmental Database Management System.