



STATE OF HAWAII
DEPARTMENT OF HEALTH
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In reply, please refer to:
File:

January 29, 2024

Rear Admiral Stephen Barnett
Commander, Navy Region Hawai'i
850 Ticonderoga Street, Suite 110
Joint Base Pearl Harbor Hickam, Hawai'i 96860
[via email only: stephen.d.barnett.mil@us.navy.mil]

Dear Rear Admiral Barnett,

SUBJECT: Disapproval of Navy's Updated Consolidated Groundwater Sampling Program to Support Reduced Red Hill Shaft Flow

On January 11, 2024, the Hawai'i Department of Health (DOH) received the U.S. Department of the Navy's (Navy's) December 2023 *Consolidation and Optimization of the Groundwater Sampling Programs, Red Hill Bulk Fuel Storage Facility*, hereinafter the "Updated Consolidated Groundwater Sampling Plan." The Navy submitted the first iteration of the Consolidated Groundwater Sampling Plan to the DOH and U.S. Environmental Protection Agency (EPA), hereinafter the Regulatory Agencies (RAs), for review on May 18, 2023. The Navy requested comments from the RAs, but did not respond to our comment letter dated July 31, 2023. Instead, the Navy submitted the Updated Consolidated Groundwater Sampling Plan in response to the DOH's November 15, 2023 disapproval of the Navy's request to reduce operation of the Red Hill Shaft (RHS) granular activated carbon (GAC) system. The DOH did not approve the reduction request because the Navy failed to provide a scientific basis that reducing RHS pumping would not harm human health and the environment.

While the Updated Consolidated Groundwater Sampling Plan includes some of the measures recommended in our November 15, 2023 disapproval letter, the submission fails to provide sufficient information for us to evaluate whether the Navy will be prepared to identify and respond to any potential movement of contamination caused by reduced pumping. Accordingly, provide a revised Updated Consolidated Groundwater Sampling Plan within 21 calendar days of receipt of this letter. Our comments below must be adequately addressed before the DOH can approve a reduction in the average pumping rate.

1. **Section 2.1, Page 2** – It is stated that field tests (e.g., headspace monitoring, fuel product thickness gauging, collection of field parameters during purging, etc.) will be conducted; however, there are no details as to how data will be reported to the RAs, what metrics will be used to evaluate whether there is potential contaminant plume

migration during reduced flow conditions, and what actions will be taken if field measurements indicate the possibility of fugitive contamination. Provide these details in the revised submittal.

2. **Section 2.4, Page 7**

- a. It is stated that twice-per-month field parameter data will be tabulated and compared against historical data to identify trends. It is then stated that this data will be provided to the RAs through EDMS (Electronic Data Management System); however, it is unclear how a trend analysis will be reported through EDMS. In what format will this be provided and exactly where will it be located in EDMS? In addition, please include a specified naming convention for these files (e.g., YYYYMMDD_trendanalysis_parameter).
- b. The evaluation of the bailer head space reading, observations in the bailer sample, and identified trends in field parameter data should be included as lines of evidence indicating fugitive migration of contamination, as these data are the only real time indicators.

3. **Section 2.4, Page 8**

- a. It is stated that verified field observations or validated laboratory data will be used to identify potential fugitive contamination migration; however, if unvalidated laboratory data indicates potential fugitive contaminant migration, then appropriate actions should be taken immediately as a conservative measure, not only when the validated data have been received. If the data are corrected following validation and no longer indicate potential fugitive migration, then the appropriate actions taken may be discontinued.
- b. Specify exactly what "appropriate actions" will be taken should one of the lines of evidence indicate that fugitive contamination migration may be occurring and presents an unacceptable risk to human health and/or the environment.

4. **Section 2.5, Pages 8 and 9** – Figure 1 is included three times. Revise accordingly.

5. **Section 2.6, Page 10** – As the agitation of the water column may cause a loss of volatiles, please state whether it is possible to collect a bailer sample with a dedicated pump in a monitoring well, or if it will need to be removed prior to collecting the bailer sample.

6. **Section 2.6, Page 11**

- a. Clarify whether the bailer sample will be collected prior to, during, or after low-flow sampling, and provide the rationale for this. In addition, include details on the collection of the head space measurement.
- b. Provide details regarding the collection of low-flow groundwater samples instead of only referencing DOH and EPA recommended methodology (e.g., at what point will the samples be collected following purging, flow rate, etc.).
- c. Include screen interval, as well as the pump depth, for each of the groundwater monitoring wells.

7. **Appendix A, Page 13** – The oily waste disposal wells (OWDF) should continue to be sampled under the Updated Consolidated Groundwater Sampling Plan to monitor for fugitive migration, in particular at least one of the OWDF groundwater monitoring wells to the west of RHS (e.g., OWDFMW03A, OWDFMW06A, or OWDFMW07A).

We note that the Updated Consolidated Groundwater Sampling Plan does not address many of the RAs' comments provided in our July 31, 2023 letter. The DOH views the Updated Consolidated Groundwater Sampling Plan as an interim document until the Site Assessment Plan required for underground storage tank system closure, or the applicable portion of the Site Assessment Plan, is in place. Because the Navy does not plan to submit a Site Assessment Plan until June 2024, responses to the RAs' July 31, 2023 comments should be included in the next iteration of the Consolidated Groundwater Sampling Plan. The RAs may also provide additional comments on the Updated Consolidated Groundwater Sampling Plan under a separate cover that fall beyond the scope of the Navy's request to reduce RHS pumping. All of these comments must be adequately addressed before the Site Assessment Plan can be approved.

The DOH recognizes that the Navy plans to use the effluent water to clean the Red Hill tanks for closure; however, as this is only a small portion of the reduced average daily pumping rate, provide the RAs with the Navy's plan to beneficially re-use the rest of the effluent water from the RHS GAC system. In addition, note that the DOH is currently re-evaluating the applicability and implementation of our total petroleum hydrocarbons Environmental Action Levels (EALs) for groundwater. The EALs presented in Table 1 of the Updated Consolidated Groundwater Sampling Plan may need to be revised in the future to reflect these changes.

Should you have any questions regarding this letter, please contact Ms. Kelly Ann Lee, Red Hill Project Coordinator, at (808) 586-4226 or at kellyann.lee@doh.hawaii.gov.

Sincerely,

Kathleen Ho

KATHLEEN S. HO
Deputy Director for Environmental Health

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