



STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:

May 17, 2024

Rear Admiral Stephen Barnett
Commander, Navy Closure Task Force – Red Hill
850 Ticonderoga Street, Suite 110
Joint Base Pearl Harbor Hickam, Hawaii 96860
[via email only: stephen.d.barnett.mil@us.navy.mil]

Dear Rear Admiral Barnett:

SUBJECT: DOH Response to Navy Closure Task Force – Red Hill's May 2, 2024 Letter Regarding Air Monitoring Plan Requirement

The Hawaii Department of Health (DOH) received the Navy Closure Task Force – Red Hill's (NCTF-RH's) May 2, 2024 letter ("letter") questioning the DOH's authority to require an Air Monitoring Plan for cleaning the Red Hill tanks. In its letter, the NCTF-RH also questioned the necessity of such a plan. Air quality during tank vetting has been raised as a legitimate community concern, and we consider it to be a potential risk to public health. I noted that you did not sign nor were copied on the letter. While the Joint Task Force – Red Hill (JTF-RH) successfully executed its defueling obligations, the transfer to NCTF-RH has raised concerns. Red Hill Facility closure and aquifer remediation deserve the same level of attention, diligence, and senior leadership involvement. Perhaps newly involved staff under NCTF-RH are not knowledgeable about DOH's May 2022 Emergency Order (Emergency Order) or may not know your stated intent to protect public health. You provide the potential continuity from JTF-RH to NCTF-RH, so your engagement and leadership are critical. We expect NCTF-RH to do better.

The NCTF-RH believes that the DOH's Emergency Order is limited to what the NCTF-RH determines presents "imminent peril to human health," which is "not from emissions from the cleaning of those tanks." The purpose of the Emergency Order is to require the safe defueling and permanent closure of the Red Hill Facility, not simply to address what the NCTF-RH deems of "imminent peril." Furthermore, the Emergency Order states that "permanent closure of the Facility must occur in a manner approved by the Department and as set forth in the Closure

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Phase of the Closure Plan,” which must include an Air Monitoring Plan as the DOH has stated to the NCTF-RH in letters dated March 8, March 28, and April 22, 2024.

After a meeting on February 27, 2024 with the NCTF-RH, APTIM Federal Services, and U.S. Environmental Protection Agency, we understood that the NCTF-RH was developing an air monitoring program that would include monitoring at and away from the exhaust vent. At the March 7, 2024 Fuel Tank Advisory Committee Meeting, the NCTF-RH also responded to community concerns about venting of the Red Hill fuel tanks by stating it would conduct air monitoring and develop a notification system. However, after the DOH required a plan for these actions in our March 8, 2024 letter, the NCTF-RH challenged and evaded the DOH’s questions and concerns.

The NCTF-RH’s March 18, 2024 submission included some of the information requested in our March 8, 2024 letter, but did not include a plan as requested. The NCTF-RH’s April 12, 2024 submission provided more detail, but still required the DOH to issue comments and provide listed expectations, including modeling, in our April 22, 2024 letter. Then, in its May 2, 2024 letter, the NCTF-RH sought a specific action level to be the single determinant of protectiveness of public health without presenting the requested information.

As explained in our April 22, 2024 letter, we require the NCTF-RH to demonstrate through modeling and monitoring that concentrations for various pollutants will remain below threshold levels to ensure that the degassing activity is conducted in a manner protective of public health. The demonstration is not limited to a single determinant, but encompasses an evaluation of the pollutants of concern and their impacts to the surrounding communities. While the NCTF-RH stated that the “air monitoring system needed to meet the requirements of both plans has been installed and is ready to implement,” the DOH requires the model to confirm that this system meets the requirements of the enclosed Exposure Duration Limits. In addition, the model will help to predict various constituent concentrations and their locations for various exposure durations before degassing begins. Monitoring will provide actual ambient air concentrations during degassing. Based on the NCTF-RH’s modeling demonstration, the DOH reiterates that changes to the system and/or locations of monitors may be required.

The DOH supports the expeditious removal of the remaining sludge and fuel in the tanks, which were manually gauged to be about zero to 4.4 inches in each of the 14 Red Hill tanks (an estimated 10,000 to 28,000 gallons total). This must be done in a manner that is safe for public health, and we expect the NCTF-RH as the owner and operator of this facility to be able to demonstrate this to the regulators and the public. We acknowledge receipt of the NCTF-RH’s May 14, 2024 Air Monitoring Plan submission and fully expect that it will meet the requirements outlined above.

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

Sincerely,

Kathleen Ho

KATHLEEN S. HO
Deputy Director for Environmental Health

Enclosures

cc w/enclosures via email only:

Amy Miller, U.S. Environmental Protection Agency
Roshni Brahmhatt, U.S. Environmental Protection Agency
Claire Trombadore, U.S. Environmental Protection Agency
Matthew Cohen, U.S. Environmental Protection Agency
Ash Nieman, U.S. Environmental Protection Agency
Jamie Marincola, U.S. Environmental Protection Agency
RDML Marc Williams, NCTF-RH
CAPT James Sullivan, NCTF-RH
CAPT Milton Washington, NCTF-RH
CAPT Steven Stasick, NCTF-RH
Sherri Eng, NCTF-RH
Milton Johnston, NCTF-RH
Joshua Stout, NCTF-RH

Exposure Duration Limits

Definitions (ATSDR: <https://www.atsdr.cdc.gov/glossary.html#G-M->):

Minimal Risk Level (MRL): "Estimate of daily human exposure to a hazardous substance at or below which that substance is unlikely to pose a measurable risk of harmful (adverse), noncancerous effects. MRLs are calculated for a route of exposure (inhalation or oral) over a specified time period (acute, intermediate, or chronic)."

Acute Exposure: "Contact with a substance that occurs once or for only a short time (up to 14 days)."

Subchronic/Intermediate Exposure: "Contact with a substance that occurs for more than 14 days and less than a year."

Chronic Exposure: "Contact with a substance that occurs over a long time (more than 1 year)."

ppmv = parts per million by volume

mg/m³ = milligrams per cubic meter air

µg/m³ = micrograms per cubic meter air

Exposure Duration	TVOC	Notes	Reference
Acute	38 ppmv 290 mg/m ³	<p>TVOC: Total Volatile Organic Compounds.</p> <p>Collect sample if 29 mg/m³ (3.8 ppmv) exceeded (10% of USNRC AEGL).</p> <p>Stop venting if one-hour average TVOC exceeds the USNRC AEGL of 290 mg/m³ (38 ppmv).</p>	<p>USNRC, 2011, <i>Acute Exposure Guideline Levels (AEGLs) for Selected Airborne Chemicals</i> (Volume 10): National Research Council, Committee on Acute Exposure Guideline Levels.</p> <p>"AEGLs represent threshold exposure limits (exposure levels below which adverse health effects are not likely to occur) for the general public and are applicable to emergency exposures ranging from 10 minutes (min) to 8 hours..."</p>
Subchronic	2.0 mg/m ³	Not-to-Exceed 15-day average	<p>ATSDR, 2017, <i>Toxicological Profile for JP-5, JP-8 and Jet A Fuels</i>: U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, March 2017.</p>
Chronic	0.13 mg/m ³	Not-to-Exceed annual average	<p>HIDOH, 2024, <i>Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater</i>: Hawaii Department of Health, Hazard Evaluation and Emergency Response, May 2024.</p>

Exposure Duration Limits

Exposure Duration	Benzene	Notes	Reference
Acute	29 µg/m ³	<p>Not-to-Exceed 24-hour average</p> <p>ATSDR Minimal Risk Level for no adverse effects for 1 to 14-day exposures (0.009 ppmv) referenced in the USEPA Acute Dose-Response Assessment summary table.</p>	<p>ATSDR, 2007, <i>Toxicological Profile for Benzene</i>: U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, August 2007.</p> <p>USEPA, 2021, Dose-Response Assessment for Assessing Health Risks Associated With Exposure to Hazardous Air Pollutants: U.S. Environmental Protection Agency, Fate, Exposure, and Risk Analysis (FERA), August 31, 2021.</p>
Subchronic	-	Not available	
Chronic	6.3 µg/m ³	<p>Not-to-Exceed annual average</p> <p>HIDOH action level for residential ambient air and the protection of young children based on a target noncancer Hazard Quotient of 0.2 (Volume 2, Appendix 1, Table C-3).</p>	<p>HIDOH, 2024, <i>Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater</i>: Hawaii Department of Health, Hazard Evaluation and Emergency Response, May 2024.</p>

Exposure Duration Limits

Exposure Duration	Naphthalene	Notes	Reference
Acute	0.1 ppmv	8-hr average concentration not-to-exceed 1/100th of the threshold limit value-time weighted average (TLV-TWA).	Hawaii Administrative Rules, Chapter 11-60.1
Subchronic	-	Not available	
Chronic	0.02 ppmv	Annual average concentration not-to-exceed 1/420th of the TLV-TWA.	Hawaii Administrative Rules, Chapter 11-60.1

Emailed Errata, dated May 2, 2024

From: [Rossio, Marianne Fuji](#)
To: [Barnett, Stephen D. RADM USN COMNAVREG PFARI HI \(USA\)](#); [Amy Miller](#); [Brahmbhatt, Roshni](#); [Trombadore, Claire](#); [Cohen, Matthew](#); [Williams, Marc F. RDML USN COMPACFLT \(USA\)](#); [Sullivan, James Rueben CAPT USN NAVFAC HAWAII PFARI \(USA\)](#); [Washington, Milton W. CAPT USN NAVFAC PAC PFARI HI \(USA\)](#); [Stasick, Steven James CAPT USN INDOCOM JTF RED HILL \(USA\)](#); [Eng, Sherri R. CIV USN COMNAVREG PFARI HI \(USA\)](#); [Johnston, Milton L. Jr. CIV USN COMNAVFACENGCOM DC \(USA\)](#); [Stout, Joshua C. CIV USN COMNAVREG PFARI HI \(USA\)](#)
Cc: [Seto, Joanna L.](#); [Lopez, Catherine](#); [Ichinotsubo, Lene K.](#); [Ho, Kathleen S.](#); [Brewer, Roger C.](#); [Simmons, Gracelda M. Lee, Kelly Ann](#); [Madsen, Michael A.](#)
Subject: Correction to DOH Response Letter to Rear Admiral Barnett Dated 4-22-24
Date: Thursday, May 2, 2024 6:33:42 PM
Attachments: [DOH Response to 4-12-2024 Air Quality Monitoring Plan \(part 1\).pdf](#)

Aloha All,

As mentioned in this morning's meeting, we identified an error in the April 22, 2024 DOH letter sent to Rear Admiral Stephen Barnett. See 5.c of the attached letter.

As spelled out in CAB's rules, the TLV-TWA evaluation of 5.c is applicable to non-carcinogenic pollutants. As benzene is categorized as carcinogenic, it would not be subject to the TLV-TWA evaluation.

In place of the TLV-TWA values, please use the Dose-Response Assessment tables to evaluate acute and chronic exposures of benzene. [Dose-Response Assessment for Assessing Health Risks Associated With Exposure to Hazardous Air Pollutants | US EPA.](#)

Please replace 5.c of the April 22, 2024 DOH letter with:

- c. A demonstration for ~~benzene and~~ naphthalene that:
- i. The ambient air concentration for any 8-hour averaging period is at or below 1/100th of the threshold limit value-time weighted average (TLV-TWA) (sub-chronic health risk); and
 - ii. The annual ambient air concentration is at or below 1/420th of the TLV-TWA (chronic health risk).

Demonstration shall be made using the current American Conference of Governmental Industrial Hygienists TLV-TWA as specified in the Documentation of the Threshold Limit Value and Biological Exposure Indices⁵. The hourly emission rate used in 5.c.ii. may be used on the maximum potential annual emissions averaged over 8,760 hours.

And add 5.d. (new letter will be sent to compile this correction with the rest of the comments and expectations).

- d. A demonstration for benzene that:
- i. The ambient air concentration for any 24-hour averaging period is at or below 0.029 mg/m³ (from the EPA Dose-Response Assessment Tables, Table 2. Acute Dose-Response Values for Screening Risk Assessments, ATSDR minimal risk levels for no adverse effects).

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- ii. The annual ambient air concentration is at or below 6.3 micrograms/m³ (from updated April 2024 DOH EAL for benzene, see Table C-3 in Appendix 1⁴).

Thank you,
Marianne

Marianne Rossio, P.E.
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