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In reply, please refer to:  
File:

May 29, 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](mailto:stephen.d.barnett.mil@us.navy.mil)]

Dear Rear Admiral Barnett:

**SUBJECT: DOH Conditional Approval of NCTF–RH Tank Cleaning Ventilation Air Quality Monitoring Plan; and Tanks 7 & 8 Ventilation CONOP and OPORD**

Under the Hawaii Department of Health's (DOH's) May 6, 2022 Emergency Order (EO), the U.S. Department of the Navy is required to submit and receive the DOH's approval for an air quality monitoring plan prior to commencing tank cleaning ventilation activities at the Red Hill Facility. The DOH acknowledges receipt of the Navy Closure Task Force-Red Hill's (NCTF-RH's) *Air Modeling Demonstration*, dated May 13, 2024, submitted as part of the *Red Hill Tank Cleaning Ventilation Air Quality Monitoring Plan (AQM Plan)* and *Request for DOH Approval to Commence Tank Ventilation at Red Hill Bulk Fuel Storage Facility*, dated May 28, 2024.

#### AQM Plan

Based on the May 13 and May 28, 2024 submittals and previous information submitted, the DOH approves the AQM Plan on the conditions that:

1. NCTF-RH adheres to the supporting documents submitted with the May 28, 2024 request for DOH approval.
2. According to the *AQM Notification and Triggers Operation Order (OPORD)* included in NCTF-RH's May 28, 2024 submittal, NCTF-RH's internal standard for ceasing ventilation is when the 1-hour Time Weighted Average (TWA) of total volatile

organic compounds (VOCs) from the installed meter exceeds 20 parts per million by volume (ppmv) at the exhaust vent. NCTF-RH shall **immediately** notify the DOH of all occurrences when active ventilation is ceased and restarted as a result of exceeding 20 ppmv at the exhaust vent. Notification shall be provided by email to [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov).

3. As proposed by the NCTF-RH, no more than six (6) tanks shall be actively vented in any calendar year.
4. No more than two (2) tanks shall be actively vented at any time. The start of ventilation for each of the two (2) tanks shall be staggered and:
  - a. Only one (1) tank shall be vented initially.
  - b. Venting of the second tank shall begin only when total VOC emissions from the first tank are reduced to 4.82 pounds per hour (lbs/hr) or less.
  - c. Written notification by email to [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov) shall be provided to the DOH **prior to the start of venting** of each tank. Notification of the start of venting of the second tank shall include a statement that the VOC emissions from the first tank are at or below 4.82 lbs/hr.

A second written notification by email shall be provided to the DOH **within 24 -hours** of the start of venting of the second tank and shall include the following information to demonstrate total VOC emissions from the first tank has reached 4.82 lbs/hr or less. The demonstration shall include:

- i. Total VOC concentration from the exhaust vent over a 1-hour averaging period, in ppmv, and the date and time the concentration was measured.
  - ii. Total flow rate from the exhaust vent for this period, in cubic feet per hour (cubic feet/hr).
  - iii. Total VOC emitted from the exhaust vent for this period, in lbs/hr. The molecular weight used in the calculation shall be provided.
  - d. **Notification to the public shall be provided 12 hours prior to the start of venting of each tank.**
5. At all times during active tank ventilation, actual total VOC emissions from the exhaust vent shall not exceed 48.2 lbs/hr, the maximum potential emission rate used in the modeling assessment.

If actual total VOC emissions from the exhaust vent exceed 48.2 lbs/hr:

- a. Active ventilation shall immediately stop.

- b. Written notification by email to [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov) shall **immediately** be provided to the DOH that includes:
      - i. The date and time of the exceedance.
      - ii. The date and time active ventilation was stopped.
      - iii. Exceedance information, including the 1-hour average total VOC concentration at the exhaust vent (in ppmv), total flowrate from the exhaust vent during this period (in cubic feet/hr), and total VOC emissions from the exhaust (in lbs/hr) during this period.
    - c. The NCTF-RH must evaluate the cause of the exceedance.
    - d. DOH approval is required prior to restarting active venting. A written request to restart active ventilation shall be emailed to [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov). The request shall include the reason for the exceedance and corrective measures taken to ensure total VOC emissions will not exceed 48.2 lbs/hr.
6. NCTF-RH shall continuously monitor and record the exhaust vent exit for 1-hour average total VOC concentrations (in ppmv) and flowrate (in cubic feet per minute; cfm) and shall provide the DOH near real time data of the following information, for each hour:
  - a. The date, time, and the 1-hour average total VOC concentration, in ppmv.
  - b. The flowrate from the exhaust vent, in cubic feet/hr.
  - c. Total VOC emissions, in lbs/hr. The molecular weight used in the calculation shall be provided.
7. A minimum of nine (9) air monitors shall be used to continuously measure and record total VOC concentrations, in ppmv, at locations approved by the DOH. A map showing the locations (including Universal Transverse Mercator (UTM) Coordinates in horizontal North American Datum-83), and identification numbers (e.g., RH-AMS-1) of the air monitors shall be shared with the public via the NCTF-RH app and NCTF-RH website.
8. Sampling by Summa cannister at a specific air monitor shall be triggered if total VOC concentrations at that monitor exceed 3.8 ppmv (10% of Acute Exposure Guideline Levels) on a 1-hour TWA as provided in the April 22, 2024 DOH letter.
  - a. Written notification by email to [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov) shall be provided to the DOH **within twenty-four (24) hours** of the start of sample collection that includes the location and identification number of the monitor, and date and time the Summa cannister began sample collection.

- b. NCTF-RH shall submit the results of the Summa canister analysis by email to the DOH at [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov) **within twenty-four (24) hours** of the NCTF-RH receiving the results of the analysis.

- 9. At all times during active tank ventilation, total VOC concentrations measured at each of the air monitors shall not exceed 38 ppmv on a 1-hour TWA.

If the total VOC concentration at any air monitor exceeds 38 ppmv on a 1-hour TWA:

- a. Active ventilation shall immediately stop.
  - b. Written notification by email to [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov) shall **immediately** be provided to the DOH that includes:
    - i. The date and time of the exceedance(s), and total VOC concentration (in ppmv) on a 1-hour TWA.
    - ii. The date and time active ventilation was stopped.
  - c. NCTF-RH shall **immediately** provide notification of an exceedance to the public.
  - d. The NCTF-RH must evaluate the cause of the exceedance.
  - e. DOH approval is required prior to restarting active venting. A written request to restart active ventilation shall be emailed to [cab.general@doh.hawaii.gov](mailto:cab.general@doh.hawaii.gov). The request shall include the reason for the exceedance and corrective measures taken to ensure total VOC concentrations will not exceed 38 ppmv on a 1-hour TWA.
- 10. The NCTF-RH shall make near real time air monitoring data available to the public by posting on a website hosted by the NCTF-RH. If this is not immediately feasible, the NCTF-RH shall initially make this data available to the public by posting the data on the NCTF-RH mobile app. Following website modifications, this data shall be available through both the NCTF-RH app and the NCTF-RH website. The information provided to the public shall include the date, time, and total VOC concentration, in ppmv, for each 1-hour averaging period.
  - 11. This approval is contingent on NCTF-RH confirming that the VOC and hazardous air pollutant (HAP) emissions from the tanks takes into consideration impacts from any fuel additives that may have been added to the fuel stored in the tanks.
  - 12. Using the maximum potential gram per second emission rate rather than the maximum potential lbs/hr emission rate, NCTF-RH shall revise Enclosures (1) and

(2) from the May 13, 2024 NCTF-RH submittal to correct the calculated maximum pollutant concentrations (in micrograms per cubic meter). NCTF-RH shall update all information in Enclosures (1) and (2) affected by the change and resubmit the Enclosures to the DOH prior to the start of venting to demonstrate ambient air concentrations will be at or below the threshold screening levels.

13. No later than seven (7) days after receipt of this letter, NCTF-RH is required to submit a complete and detailed AQM Plan that encompasses and combines all previous submittals, including but not limited to, details of the venting operations, air monitoring equipment and locations (UTM coordinates), a map/plot showing the location of the nine (9) monitoring stations overlaid on the modeled 1-hour VOC concentrations, Navy response actions and notifications, and all modeling, calculations, and assumptions. The AQM Plan shall identify all of the DOH requirements and how the NCTF-RH will comply with these requirements. In accordance with the EO, a redacted version of the AQM Plan must be submitted to the DOH no later than ten (10) business days after the unredacted version is submitted.

#### Concept of Operations (CONOP) and OPORD

Lastly, the DOH received the NCTF-RH's Tanks 7 and 8 CONOP and OPORD for active ventilation. We received the initial *Tank 7 & 8 Tank Forced Ventilation CONOP* on April 17, 2024; responses to regulator comments on May 2 and 17, 2024; and a revised CONOP on May 17, 2024. We received the *NCTF Tank Venting Operations Order* on May 21, 2024; responses to regulator comments on May 23, 2024; and a revised OPORD on May 28, 2024. Based on the information provided, the DOH approves the CONOP and OPORD on the conditions that:

14. The NCTF-RH hosts a walkthrough for the DOH to observe spill diversion and control measures before executing the OPORD Start (Day 2) 20-inch and 12-inch motor operated valves removal. Any comments from the DOH must be addressed before the valve removal operations.
15. Per the DOH's January 18, 2024 conditional approval of tank cleaning, the NCTF-RH shall provide weekly written updates, including a summary of completed work and any updates to the cleaning schedule.

Rear Admiral Barnett  
May 29, 2024  
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Should you have any questions regarding this letter, please contact Ms. Kelly Ann Lee, Red Hill Project Coordinator, at (808) 586-4226 or [kellyann.lee@doh.hawaii.gov](mailto:kellyann.lee@doh.hawaii.gov).

Sincerely,

*Kathleen Ho*

KATHLEEN S. HO  
Deputy Director for Environmental Health

cc via email only:

Amy Miller, U.S. Environmental Protection Agency  
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