***Public CRI Meetings***

1. *Q: Is the Navy willing to meet more than 2x a Quarter for CRI in person meetings with EPA and Navy that public is invited to?*

**Response: Not at this time. The 2023 ACO provides the frequency of meetings to occur with the elected CRI representatives – twice per quarter. There are substantial public outreach activities in addition to the CRI meeting which afford the public access and interaction opportunities. Some of these activities include meeting with the Fuel Tank Advisory Committee (FTAC), the Defueling Information Sharing Forum (DISF), participating in neighborhood boards, meetings with elected officials such as the Governor and Hawaii state representatives, etc.**

***Drinking Water Complaints and Testing***

2. *Q: We request that the number of families who called into EOC with water issues be included in the Daily Situation Report*.

**Response: Per Section 6.11 of the 2023 Administrative Consent Order, a summary of all calls received by the Navy is posted on the Safewaters website each month. Since Sep. 2023, there have been over 140 EOC calls for information and samples, in addition to referrals by EPA, all of which resulted in 77 sample requests.**

3. *Q: Walter Chun - EOC complaint of water issues are addressed by the SOP-EOC shown on the website. How are the actions taken by the EOC documented and reviewed? Is there a study or evaluation of these complaints for trends, commonalities, locations, etc.? If no, why not? If yes, is this provided to the public?*

**Response: The Navy responds and documents all complaints it receives pursuant to Section 6.11 of the 2023 ACO SOW. Under that section, a summary of calls received by the Navy, or referred to the Navy by EPA or DOH, are posted monthly on the jbphh-safewaters.org website. Trends will be examined as part of the already contracted AECOM LTM Capstone report which will be completed after all samples have been taken within Period 7.**

4. *Q: Melodie - Has the Navy tested any water for antifreeze?*

**Response: Antifreeze is a generic term that can refer to a number of chemicals/compounds. In relation to fuels stored at Red Hill, there is fuel system icing inhibitor in JP-5 fuel.**

**The Navy is monitoring groundwater quarterly for 2-(2-methoxy ethoxy) ethanol, the active component of Fuel System Icing Inhibitor**

5. *Q: Walter Chun - We were told and believe that the sampling of the water throughout the military housing communities were and are conducted over the last two years and continuing. Has the evaluation and on-going monitoring of this data provided trends and abnormalities? Has a report of the water sampling monitoring been issued?*

**Response: The current Long-Term Monitoring (LTM) program has been ongoing for approximately two years and has conducted over 7,900 samples (see the JBPHH Safewaters Drinking Water dashboard for**

**results). A report of the LTM program, including the last two years of data, will be developed as part of the final summary of Period 7 of the LTM program. In addition to this final summary, after the completion of each LTM period, Stage 5 summary reports are provided on the Safewaters website for each of the 19 zones. Furthermore, in January 2024, the Navy convened a group of subject matter experts, called a "Swarm Team", in conjunction with EPA and DOH to further analyze data trends and investigate the root cause of low-level total petroleum hydrocarbon (TPH) detections in the Joint Base Pearl Harbor-Hickam drinking water system. The Navy is currently drafting a technical memo regarding trend analysis for regulatory review and plans to share the results with the public when complete.**

6. *Q: Walter Chun - Has the water sampling data after complaints received been evaluated for location in the drinking water system, neighborhoods, illness complaints/clusters, etc.? Where are these evaluations? If the evaluations were not conducted, why not?*

**Response: A spatial and temporal distribution of total petroleum hydrocarbons (TPH) results, as well as time-series graphs of TPH concentrations, has been developed for each of the 19 Long Term Monitoring zones. A draft has been reviewed by DOH and EPA, and the Navy is incorporating comments and drafting a full technical memorandum to be submitted to the Regulatory Agencies no later than Feb. 27, 2024.**

7. *Q: Walter Chun - Is there an independent group of scientists, medical specialists, environmental specialists, and mechanical professionals evaluating and plotting the water sampling data and other data to identify the source(s) of the petroleum in the drinking water? Where are their reports and evaluations? If there is not a group to study and evaluate, why not?*

**Response: In late January 2024, the Navy convened a group of subject matter experts, called the "Swarm Team", in conjunction with EPA and DOH to further analyze data trends and investigate the root cause of low-level total petroleum hydrocarbon (TPH) detections. The Navy is currently drafting a technical memo regarding trend analysis for regulatory review and plans to share the results with the public when complete. The regulatory agencies are also conducting independent review and analysis of data collected.**

8. *Q: David Kimo - Since "chain of custody" is a legal term used in a court of law and NOT a Navy or DOH or EPA protocol, why don't you test water that the resident has collected that has a sheen on it?*

**Response: The term chain of custody is not just a legal term. It is used with required control of all actions involving personnel/procedures used to collect, package, ship, receive, unpack and process environmental samples from the project site to the testing laboratory. It is a requirement of DOH/EPA and the Navy to have a complete chain of custody tracking for environmental samples as part of the quality assurance and quality control (QA/QC) process to ensure sample collection and analysis integrity. Sample collection and analysis is conducted under strictly controlled conditions which a resident would not be able to perform with a self-collected sample.**

## ***Premise Plumbing***

9. Q: ~~We are requesting a hot water tests in houses that have experienced water contamination issues. To date, tests have only been done on cold water.~~

CLARIFICATION: We are aware of 1 water sample taken from 1 hot water heater. Are water samples continuing to be collected from hot water heaters?

**Response: The Navy conducted water heater sampling of ten homes as a part of a preliminary premise plumbing investigation. A draft of this report was provided to the regulators on the week of Feb. 5 for a peer review and feedback. Currently, the Navy is incorporating the feedback and finalizing the report to share results with the public. The Navy is also testing hot water heaters when a resident requests.**

## EALs

10. *Q: Melodie Aduja - DOH and EPA EALs for the tested chemicals under the LTM tests. We have experienced a reporting of non-detect when the level of detection was below the DOH's EAL yet above the EPA's interim EAL. DOH has a history of relaxing the EALs when there is evidence of a Navy detection close to or above the DOH's current EALs. Take for example, in April 2023, the DOH increased the EALs 100% for PFOA (12ppt) and PFOS (7.7ppt) when the EPA's interim EALs were substantially stricter at .004 ppt for PFOA and .02 for PFOS. Hawaii's EAL for PFOA is 3,000 times higher than the EPA's interim lifetime health advisory of .004 ppt. As such, we cannot rely on a finding of non-detect because such level, although acceptable under DOH standards, may not be acceptable per EPA standards. For public health and wellness of the environment and the aquifer, we should be informed of general, nation-wide EPA EALs for safe drinking water rather than to rely on the thresholds set by the DOH. DOH's more relaxed threshold seems to shield the Navy by justifying a non-detect finding.*

**Response: As noted during CRI meeting discussions, the Navy encourages the community representatives to seek clarification on their questions concerning EALs from the Hawaii Department of Health (DOH). U.S. Environmental Protection Agency (EPA) does not set EALs, however they can provide further information regarding Lifetime Health Advisories (LHA). The Navy does not set or influence the generation or derivation of EAL or LHA figures, but rather uses these values when comparing sampling results in coordination with DOH and EPA to determine appropriate actions.**

## *Air Monitoring*

11. *Q: MAJ Feindt - What specific (VOC) components are being measure/scanned for?*

**Response: Total Volatile Organic Compound (VOC) monitoring is being conducted through the use of a Photoionization Detector (PID). Individual VOC components are not measured by a PID. PIDs are first responders in that they are not specific to any one volatile organic gas but respond to many. Over 700 gases fall under the VOC banner and PIDs are commonly used as a first responder-screening tool. VOC monitoring was implemented during defueling to establish background VOCs to compare and provide early warning in the event of a spill during defueling of the Red Hill Bulk Fuel Storage Facility. The broad number of gasses measured makes a PID an ideal first responder for identifying potential releases even though the PID cannot directly determine the gas type detected.**

12. *Q: Susan - Is the air quality monitoring related to the development of EALs for vapor intrusion?*

**Response: No. The Navy is not responsible for developing EALs.**

13. *Q: Susan - What have you learned from the air quality monitoring so far?*

**Response: Air quality monitoring is not within the scope of the 2023 ACO. Any air monitoring the Navy was conducting was being analyzed to provide a potential 'early warning' if a release would occur and monitor ambient air. The results of air quality monitoring indicate that no fuel was released during defueling operations.**

14. *Q: Susan - On your JBPHH Safe Waters website, which also includes the air monitors, it shows Halawa/McGrew Point at a VOC level of 2.3 on 10/24/2023. What level does the Navy consider safe? Where did the Navy get this "safe" number? Why is this one higher than the rest of the air monitors?*

**Response: Outside the scope of the ACO – the Navy does not set VOC levels and follows regulatory standards with regard to whether a VOC level is "safe."**

15. *Q: Susan - In your letter you mentioned fuel oil, gasoline paint, composite and wood products as examples of VOC the air monitors are measuring. Please provide us with a complete list of ALL the VOCs the air monitors are measuring?*

**Response: Total Volatile Organic Compound (VOC) monitoring is being conducted through the use of a Photoionization Detector (PID). Individual VOC components are not measured by a PID. PIDs are first responders in that they are not specific to any one volatile organic gas but respond to many. Over 700 gases fall under the VOC banner and PIDs are commonly used as a first responder-screening tool. VOC monitoring was implemented during defueling to establish background VOC-levels to compare and provide early warning in the event of a spill during defueling of the Red Hill Bulk Fuel Storage Facility. The broad number of gasses measured makes a PID an ideal first responder for identifying potential releases even though the PID cannot directly determine the gas type detected.**

16. *Q: Susan - Please provide us with the Navy's "safe" levels of EACH TYPE of the VOCs provided above that are being measured with these air monitors.*

**Response: See above answer.**

17. *Q: Walter Chun - The safewaters JBPHH provides vapor monitoring data. We assume it is the data from the monitoring instruments that were installed in 2023. Please provide a summary of this data and the analysis of this data in regards to human health exposures, including vapor intrusions in the residences.*

**Response: Air quality monitoring is not within the scope of the 2023 ACO. The Navy does not conduct air quality monitoring inside of residences. Any air monitoring the Navy was conducting was being analyzed to provide a potential 'early warning' if a fuel release occurred during defueling operations and monitor ambient air. The results of air quality monitoring indicate that no fuel was released during defueling operations.**

***Safewaters Website and App***

18. *Q: Where can we find an exportable copy of the data used for the groundwater monitoring dashboard? As it is currently set up to display, the data cannot be copied/exported*

**Response: The Safe Waters website (**https://jbphh-safewaters.org/**) has the capability under the interactive map to select, filter and copy tablature sampling data. If interested community members**

**need assistance with the website we recommend visiting one of our routine water testing informational booths, the schedule of which are easily found at the website under community events.**

19. *Q: When was the groundwater monitoring data released to the public / the dashboard posted?*

**Response: In October 2022, the Navy began posting groundwater monitoring data to the SafeWaters website. The Navy established the website's Groundwater Monitoring Dashboard in 2023.**

20. *Q: When will the complete data set for the drinking water dashboard be uploaded? Certain locations that had known results above EALs; i.e. Red Hill Elementary only has data going back to March of 2022 (several months after high levels of TPH detected)*

**Response: (NCTF/NAVFAC) Safewaters is updated monthly to incorporate any Drinking Water Long Term Monitoring sample that occurred in the previous calendar month. Drinking water samples are collected daily and incorporated in the next monthly update upon data validation of the respective sample. This data goes back to March 2022, as that was the start of the Drinking Water Long-Term Monitoring program.**

21. *Q: Susan - When will the Navy's app that will be tracking the last 4,000 gallons of fuel sludge come online?*

**Response: The NCTF will take over the app from the JTF-RH at the end of March 2024. Updates of various aspects of the closure progress, including residual fuel and sludge removal, will be posted to the app and website.**

22. *Q: Walter Chun - What is the process for reporting and correcting LTM mapping inaccuracies (AMR neighborhood)?*

**Response: If you believe there is an error on the LTM mapping system, provide details of the specific inaccuracies to the NCTF Public Affairs Team (nctf_pao@us.navy.mil) and we will review the information with the appropriate departments for possible correction of the mapping tool.**

***Tank Cleaning and Pipeline Removal***

23. *Q: Susan - What is the Navy's estimate as to how long the sludge (last 4,000 gallons) will take to remove it in its entirety? In other words what is the estimated completion date for those last 4,000 gallons to be taken out?*

**Response: Current completion estimate for the last estimated 4,000 gallons of residual fuel and the approximate 10 miles of pipeline is fall of 2027. Sludge removal from the tank is estimated to be completed by summer of 2027.**

24. *Q: Ann Wright - 4,000 gallons of liquid fuel remaining under "tank main" level and the 28,000 gallons of fuel sludge at the bottom of the tanks. This remaining fuel and sludge can't be removed by gravity flow so must be removed by "destructive means". Regarding "destructive means," Navy please elaborate on what that entails.*

**Response: Regarding the estimated 4000 gallons of fuels, these are located in pipeline low points, valves, and appurtenances that are not accessible unless the pipes are physically dismantled. "Destructive means" means the pipes will be cut open and removed in pieces in a way that prevents**

**them from ever being returned to use in the facility. The pipeline removal action will accomplish two goals, (1) the physical prevention of reuse of the RHBFSF for fuels, and (2) facilitate access to remaining residual fuels. The estimated 28,000 gallons of sludge are located at the bottom of the active RHBFSF tanks, and will be removed during the forthcoming Tank Cleaning activities scheduled to commence later this year.**

25. *Q: Walter Chun - We are preparing for the tank cleaning operations involving hazardous materials. Where is the Environmental Assessment or Environmental Impact for performing this work? Has it been made available for public comment?*

**Response: As the Tank Closure activities are required by the Superseding Emergency Order and conducted in accordance with the requirements of the Hawaii Administrative Rules (HAR) implementing the Resource Conservation and Recovery Act (RCRA) I requirements. The regulatory mechanism under which defueling and closure will take place provides appropriate environmental protection and displaces the need to conduct National Environmental Policy Act (NEPA) analysis. The Navy must comply fully with the Underground Storage Tank (UST) closure regulations and does not have discretion or decision-making authority on the actions it must take to close the facility.**

26. *Q: Walter Chun - Is the tank cleaning and pipe removal operations part of the hazardous waste operations for Red Hill?*

**Response: No, there are no current or proposed hazardous waste operations being undertaken at the Red Hill Bulk Fuel Storage Facility (RHBFSF).**

**The generation of hazardous waste during tank cleaning and pipeline removal is not expected based on past cleaning operations. Removal and disposal of waste generated during tank cleaning and pipe removal operations will be completed in accordance with state and federal waste management regulations, to include the development of waste characterization profiles, packaging, labeling, onsite accumulation, transportation and the ultimate disposal facility. The Navy is voluntarily managing the waste using hazardous waste procedures to provide the highest level of protection and auditability of the operation.**

27. *Q: Walter Chun - Has the EPA and Navy declared the Red Hill tunnel and surrounding area a hazardous waste site?*

**Response: The Red Hill Bulk Fuel Storage Facility is not a hazardous waste facility as defined by the Resource Conservation and Recovery Act (RCRA). However, there are two sites that have been identified as potentially containing hazardous materials that are currently being addressed through the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process – the oily waste disposal and the AFFF release.**

28. *Q: Walter Chun - Is the above information (above 3 questions) included or will be included in the request for bid? How will contractors be able to bid on the contract work for the tank cleaning and pipe removal if they are not informed of the above questions?*

**Response: The tank cleaning contract was awarded in FY23 and was fully informed of the relevant facts associated with the status of the Red Hill Bulk Fuel Storage Facility.**

29. *Q: Walter Chun - Is there an Environmental Impact or Environmental Assessment for the Red Hill tunnel associated facilities and surrounding area for the identification of the hazardous materials and substances in and around the environment? Can CRI be provided this information or directed to the source of this information?*

**Response: There is a forthcoming Site Assessment which is the first step towards identifying site releases, and where further assessments may occur.**

30. *Q: The Ultraviolet (UV) monitoring discussed in the tank closure plans will be used to verify the cleanup inside the tanks. Why is this process not used to verify the presence of petroleum products in the water, sinks, bathtubs/showers, dishes, etc. inside the homes? (If effective to verify the presence or petroleum products for tank cleaning, why not using it in the homes?)*

**Response: The UV monitoring was determined to not be an effective verification method for the three fuels stored in the Red Hill Bulk Fuel Storage Facility.**

***Red Hill Shaft***

31. *Q: Walter Chun - Please provide the information to explain and justify the draining of the aquifer at this rate and how long it will have to continue.*

**Response: The current pumping rate, GAC filtration system discharge is per direction of the Hawaii Department of Health (DOH) under the Superseding Emergency Order. The Navy is working with DOH to reduce pumping as the majority of defueling activities have concluded.**

32. *Q: Walter Chun - How long is the Navy planning on pumping the water out into Halawa Stream?*

**Response: Until such time as Hawaii Department of Health directs us to stop.**

33. *Q: Walter Chung - Please provide the information to explain and justify the draining of the aquifer at this rate and how long it will have to continue. Also include the cost of this activity and the environmental impact and assessment of dumping this water into the Halawa stream.*

**Response: See above answers. Cost is outside the scope of the ACO.**

34. *Q: Walter Chun – (What are) The water sampling results from the aquifer, and after the GAC filtration system?*

**Response: All sampling data from the groundwater monitoring wells, which monitor the aquifer, are currently contained on the groundwater data dashboard on the Safewaters website. Data from the GAC effluent ("after the GAC filtration system") is provided in the monthly Discharge Monitoring Reports, which the Navy provides to the Hawaii Department of Health (DOH) as a regulatory requirement of the discharge permit. This data is not on Safewaters, but the Navy is providing a copy of the sampling data in the discharge reports as an attachment to this correspondence.**

***Ventilation***

35. *Q: Susan - Is it possible for this ventilation to come up in the yards or houses of military housing*

**Response: No. There are no ventilation intake or exhaust points located in or near residences.**

36. *Q: Susan- Is it possible for this ventilation to come up in the yards, houses or parks at Kapilina Beach Homes, which is currently being privately managed but continue to be on the Navy water system*

**Response: No.**

37. *Q: Susan - How are the known and potential ventilation being tracked and measured? Is Navy using air quality monitors?*

**Response: The potential to emit regulated air pollutants during ventilation of the tanks was fully evaluated and in October 2023, the Hawaii Department of Health (DOH) determined that no air permitting or monitoring was required.**

38. *Q: Ventilation will be provided for the tank cleaning and will exhaust to the atmosphere. What monitoring will be required? How will the public be able to see the results for monitoring for benzene, lead, petroleum products, and other contaminants?*

**Response: The potential to emit regulated air pollutants during ventilation of the tanks was fully evaluated and in October 2023, the Hawaii Department of Health (DOH) determined that no air permitting or monitoring was required.**

39. *Q: Marti Townsend - Ventilation can come up in residents' yards. How being addressed?*

**Response: There are no ventilation intake or exhaust points located in or near residences.**

***Closure Plan***

40. *Q: The Closure Plan list references that are not available to the public. Please post or otherwise make these references available for the public:*

**Response: All references that can be released to the public, are available to the public. Some references are considered DCRIT/TCA items and are not available for public release for security reasons and/or are procurement sensitive, and/or are not the intellectual property of the Navy and as such we are unable to provide.**

41. *Q: The Tank Inspection and Repair Maintenance report, API RP1604 "Closure of Underground Petroleum Storage Tanks"; API Std 2015, ANSI Z117.1; API RP 575; API RP 2219 API STD 2217A. These documents are not readily available to the public please post for public information.*

**Response: These references are not the intellectual property of the Navy. If you wish to obtain the American Petroleum Institute references use this link:** API | Purchase API Standards & Software.

42. *Q: The closure plan indicates that the contractor will remove the fuel from the pipelines and other areas. Will they be operating the fuel system to perform this task? What training and experience will they have to prevent releases?*

**Response: The Contractor will not be operating the fuel system. The removal of the estimated 4,000 gallons of residual fuel will be accomplished via destructive means as detailed in the answer to question # 28.**

43. *Q: The references in the closure plan, page 26, includes a reference CPL 2.100? What is this reference and will it be posted for the public information?*

**Response:** OSHA Instruction CPL 2

***AFFF***

44. *Q: When will the AFFF tanks and system be removed?*

**Response: We estimate that the AFFF tanks and system removal will occur late 2026 pending deconfliction with the other decommissioning efforts (i.e. tank cleaning and pipeline removal). Note the AFFF concentrate is scheduled to be removed in April-May, 2024.**

45. *Q: Walter Chun - Have the aquifers at Red Hill been tested for fuel and AFFF?*

**Response: Yes**

46. *Q: Walter Chun - Please provide sample results from question above (aquifer at Red Hill testing for fuel and AFFF)*

**Response: Safewaters website lists all applicable testing.**

***Army GAC Filters***

47. *Q: Walter Chun - Please answer these (prior) questions regarding the GAC filters installed in and around the (Army) military family housing neighborhoods as well.*

**Response: Please contact the Army for information on any GAC filters installed near Army housing.**

***Miscellaneous***

48. *Q: What is the efficiency of this field test measure?*

**Response: More information in needed for context before the Navy can answer this question.**

# JTF-RH ANSWERS TO CRI QUESTIONS RELATED TO DEFUELING

## 16 FEBRUARY 2024

1. Has any fuel been released into the secondary containment at the Hotel Pier during defueling?

ANSWER: No, there were no fuel releases at the Hotel Pier during the USINDOPACOM JTF-Red Hill (JTF-RH) led defueling phase of the Hawaii Department of Health (DOH) mandated Red Hill Bulk Fuel Storage Facility (RHBFSF) closure plan. DOH, the Environmental Protection Agency (EPA), and the U.S. Coast Guard were present and provided oversight of all defueling operations at Hotel Pier.

2. How many, leaks, spills, or other types of release of fuel from the transfer system has occurred since the start of defueling?

ANSWER: During defueling JTF-RH had two leaks from valves. The first was a one-gallon leak on 16 October 2023, and the second was a two-gallon leak on 26 October 2023. These leaks were contained, there was no release to the environment, and at no time was there a threat to personnel, the community, aquifer, or drinking water.

During the start of defueling operations on 16 October 2023, JTF-RH experienced a one-gallon leak from a control valve gasket in the Underground Pump House (UGPH), which is approximately three miles from the RHBFSF tanks and outside of the underground injection control area; not above the aquifer. All fuel was captured in a containment pan placed under the valve as part of a multi-layered risk reduction plan to protect the environment and aquifer, and JTF-RH personnel immediately corrected it. There was no release to the environment, and at no time was there a threat to personnel, the community, aquifer, or drinking water.

On 26 October 2023, JTF-RH experienced a two-gallon leak from a low point drain in the UGPH, which is approximately three miles from the RHBFSF tanks and outside of the underground injection control area; not above the aquifer. All fuel was captured in a containment pan placed under the low point drain as part of our multi-layered risk reduction plan to protect the environment and aquifer, and JTF-RH personnel immediately corrected it. There was no release to the environment, and at no time was there a threat to personnel, the community, aquifer, or drinking water.

Leaks like these during defueling were not unexpected - especially in a facility of this size - and JTF-RH was fully prepared to respond. JTF-RH personnel immediately identified the problems, took actions to isolate the valves, and ensured the fuel was captured with bins and absorbent pads. In both instances, DOH and EPA personnel were on-site and observed JTF-RH's response and corrective actions. They then inspected to verify system integrity was completely restored before granting permission to continue defueling operations. Documentation of both events was submitted to DOH and EPA per their instructions contained in their approval letters for the Defueling Plan.

This information was also briefed to the CRI during the November 2023 meeting and can be viewed per the following link: https://www.dvidshub.net/video/904428/jtf-rh-commander-provides-detailed-defueling- update

3. What is the physical location of these releases?

   ANSWER: There were no fuel releases into the environment at any point during the USINDOPACOM JTF-RH led defueling phase of the DOH mandated RHBFSF closure plan. See response to question two for the locations of two valves that experienced leaks (approximately three gallons total); all fuel was captured in a containment pan with no release to the environment.

4. What are these locations in relation to the aquifer openings?

   ANSWER: There were no fuel releases into the environment at any point during the USINDOPACOM JTF-RH led defueling phase of the DOH mandated RHBFSF closure plan. Response to question two highlighted that two valves experienced leaks (approximately three gallons total); all fuel was captured in a containment pan with no release to the environment. The locations of these two valves are approximately three miles from the RHBFSF tanks and outside of the underground injection control area; not above the aquifer.