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DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Emergency Order to UNITED STATES NAVY For Emergency Change-In-Service and Defueling of 20 Underground Storage Tanks, Red Hill Bulk Fuel Storage Facility	DOCKET NO. 21-UST-EA-02 MOTION FOR LEAVE TO INTERVENE OF HONOLULU BOARD OF WATER SUPPLY; DECLARATION OF ERWIN M. KAWATA, EXHIBITS A THROUGH W; DECLARATION OF ELLA FOLEY GANNON, EXHIBITS A THROUGH B; CERTIFICATE OF SERVICE

MOTION FOR LEAVE TO INTERVENE OF HONOLULU BOARD OF WATER SUPPLY

In 1987, the United States Environmental Protection Agency ("EPA") designated the aquifer that underlies the United States Department of the Navy's (the "Navy") Red Hill Bulk Fuel Storage Facility ("Red Hill") as a sole-source aquifer as it is the "principal source of drinking water" for the island of Oahu, and that "[i]f contaminated, would create a significant hazard to public health." Southern Oahu Basal Aquifer in the Pearl Harbor Area at Oahu; Principal Source Aquifer Determination, 52 Fed. Reg. 45496, at 45497 (Nov. 30, 1987). Tragically, this contamination has occurred, and a significant public health hazard has and will continue to persist as a result of the Navy's release of fuel from the Red Hill facility. In response to this situation, on December 6, 2021, the Hawaii Department of Health ("DOH") issued an emergency order requiring the Navy to immediately suspend fuel storage operations at the Red Hill facility, expeditiously install a drinking water treatment system at the Navy's Red Hill Shaft drinking water well, and promptly take action to defuel the underground storage tanks ("USTs") at Red Hill (the "Emergency Order"). Disturbingly, the Navy is contesting this Emergency Order and commencing a proceeding to object to this order.

It is absolutely critical that the Honolulu Board of Water Supply ("BWS"), the entity charged with the responsibility of managing Oahu's drinking water resources and providing clean water to the majority of the residents of our island community, be a party in this contested case. Pursuant to Hawaii Administrative Rules section 11-1-35, the BWS hereby respectfully moves for leave to intervene as a party to this proceeding concerning this Emergency Order. The BWS should be permitted to intervene in this hearing because it unquestionably has a direct and substantial interest in the outcome of this contested case that will be harmed if intervention is not granted, and that interest will not be adequately represented in the absence of intervention. In

addition, granting intervention will not adversely affect any party or the timely resolution of the proceeding; rather, the BWS is uniquely positioned to provide the Director of Health and/or the Hearings Officer with subject matter expertise on issues with the potential to impact drinking water quality that will assist in understanding the complex technical issues that inform a decision on the Emergency Order. This Motion should be granted.

This Motion is based on Hawaii Administrative Rules Section 11-1-35, the filings herein, and the Declarations of Erwin M. Kawata ("Kawata Decl.") and Ella Foley Gannon ("Gannon Decl."), which taken together demonstrate that the BWS' intervention should be permitted.

I. RELEVANT BACKGROUND

The Red Hill facility is located on the island of Oahu, Hawaii, approximately 2.5 miles northeast of Pearl Harbor, occupying approximately 144 acres of land along the western edge of the Koolau Range situated on a topographic ridge that divides the Halawa Valley and the Moanalua Valley. *See* Kawata Decl. at ¶ 2. The Red Hill facility sits directly above Oahu's federally designated sole-source groundwater aquifer, the Southern Oahu Basal Aquifer, from which the BWS supplies more than three quarters of the total island-wide water supply. Oahu's sole-source aquifer is currently used to supply the island with drinking water and is an irreplaceable resource with a high vulnerability to contamination. *See id*. at ¶ 16.

The Navy stores nearly 200 million gallons of fuel at Red Hill in colossal World War II vintage USTs a mere 100 feet above this irreplaceable groundwater aquifer from which the BWS provides drinking water to residents from Moanalua to Hawaii Kai. *See id*. at ¶¶ 15, 18. The twenty Red Hill USTs were field constructed during the early 1940s by mining into the ridge to create cavities for concrete tank shells lined with ¼-inch thick steel plates welded together. *See id*. at ¶ 14. The outside or backside of these steel liners as well as the concrete tank shells cannot

be physically inspected or directly maintained. Each tank is approximately 250 feet tall, 100 feet in diameter, and provides a fuel storage capacity of up to 12.5 million gallons. *See id*. at ¶ 12. Two of the Red Hill USTs are currently out of service and two or three are generally empty as part of the Navy's ongoing clean, inspect, and repair program. This leaves at least 15 tanks, with a total capacity of over 187 million gallons, in operation directly above Oahu's sole-source aquifer. The Red Hill facility also includes a complex system of pipelines, tunnels, and other infrastructure which are utilized in managing and transporting the massive amount of fuel over this drinking water resource.

The DOH recognizes that "the storage of up to 187 million gallons of fuel, 100 feet above a drinking water resource, is inherently dangerous." *See id*. at ¶ 39. Now the Navy's inherently dangerous operations at the Red Hill facility have unquestionably, and possibly irreparably, contaminated the drinking water of tens of thousands of Oahu residents, including our service members and their families. Fuel releases from the Red Hill facility have forced the Navy to shut down the primary drinking water well from which it supplies Joint Base Pearl Harbor-Hickam and has left the BWS no choice but to stop pumping drinking water from many of the wells that service metropolitan Honolulu. *See id*. at ¶ 38. Make no mistake, the people of Oahu are in the midst of an unprecedented water crisis. Recent events demonstrate that the fuel releases from and the Navy's inability to maintain the Red Hill facility are spiraling out of control. On October 26, 2021, the DOH issued the Navy a Notice of Violation and Order finding several violations of Hawaii law during a compliance inspection conducted at the Red Hill facility from September 28, 2020 through October 8, 2020 and ordering the Navy to pay a $325,182 fine. *See id*. at ¶ 29. In the past couple of years there have been more and more fuel releases into the environment, including a May 6, 2021 release of a reported 1,600 gallons of jet

fuel from supply piping in the lower access tunnel tanks during the refilling of Tank 20, at least two releases from the Hotel Pier and Kilo Pier pipelines fed by the Red Hill facility, and a release last month of a supposed 14,000 gallons of a mixture of water and fuel from the Navy's fire suppression system. *See* Emergency Order at 2-3. These fuel releases have resulted in detections of petroleum constituents in its own drinking water supply as high as 350 times the DOH's environmental action levels ("EALs") as well as in the monitoring wells in the vicinity of Red Hill. *See* Kawata Decl. at ¶¶ 34, 35, 40. The Navy and the DOH have received hundreds of complaints from users of the Navy's water distribution system concerning fuel or chemical smells from the Navy drinking water. *See* Emergency Order at 2. This is unacceptable.

It is undisputed that the Navy's operations at Red Hill have contaminated the environment and put Oahu's critical drinking water resources at risk. Numerous episodic releases from the Red Hill facility have occurred and sampling from under and around Red Hill has demonstrated the existence of petroleum contamination in the very aquifer that sustains Oahu's water supply. *See* Kawata Decl. at ¶ 19. In January 2014, the Navy reported a release into the environment of approximately 27,000 gallons of fuel from Tank 5. *See* Emergency Order at 2. In September 2015, the Navy and the Defense Logistics Agency – the owner of the fuel stored at Red Hill – entered into an administrative order with the EPA and the DOH requiring the Navy to conduct certain investigations and other work to address fuel releases from Red Hill. *See id*. This order recognizes that corrective action by the Navy is "necessary to address potential impacts to human health, safety and the environment … due to historical, recent and potential future releases at the [Red Hill] Facility." To date, many of the deliverables required by this order still have not been approved by the regulators, with key Navy reports disapproved and the Navy tank upgrade proposal rejected. The Emergency Order explicitly

recognizes that the Navy "has consistently been unable to submit AOC deliverables to the satisfaction of the Department."

As the largest municipal drinking water utility in Hawaii, the BWS has been calling for urgent action to address the significant risked posed by the Red Hill facility for years. In fact, the BWS has submitted over 140 letters providing feedback on the Navy's AOC deliverables, including urging the Navy to take decisive action to relocate or upgrade the Red Hill facility. *See* Kawata Decl. at ¶ 27. The BWS has also informed the DOH that the Navy's operations at the Red Hill facility do not comply with Hawaii law. Specifically, the Red Hill facility cannot be operated to prevent releases for its operational life as required by Hawaii Revised Statutes § 342L-32(b), is not adequately protected from corrosion as required by HAR § 11-280.1-20, and does not meet the requirements for leak detection as required by HAR § 11-280.1-33. *See* Gannon Decl., Exhs. A, B. Unless defueled as required by the Emergency Order, the Red Hill facility and associated infrastructure will continue to release fuel into the environment imperiling our precious drinking water.

II. BASIS FOR INTERVENTION

A. STANDARD FOR INTERVENTION

The Emergency Order calls for a contested case hearing in accordance with Hawaii Revised Statutes Chapter 91 and Hawaii Administrative Rules Chapter 11-1. *See* Emergency Order at 5. Hawaii Administrative Rules Section 11-1-35 governs intervention in contested case hearings before the DOH. As relevant to this proceeding, the DOH's rule pertaining to intervention provides that:

> (a) Any person or agency not a party to the contested case hearing may seek to become a party by filing a motion for leave to intervene. The motion shall state the grounds upon which the person or agency claims to have an interest in the

> proceeding. The person or agency shall file the motion at least ten days before the hearing and shall serve the motion upon the hearings officer and all parties or their attorneys. Motions for intervention will be granted to persons or agencies properly seeking and entitled as of right to be admitted as a party; otherwise, at the discretion of the hearings officer, they may be denied. As a general policy, such motions shall be denied unless the person or agency shows that it has an interest in a question of law or fact involved in the contested matter and the disposition of the contested case may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's interest is adequately represented by existing parties.
>
> (b) The hearings officer may permit intervention to such an extent and upon such terms as the hearings officer may deem proper and shall consider whether the intervention will unduly delay or prejudice the adjudication of the rights of the original parties.

HAR § 11-1-35. As set forth in greater detail below, the BWS should be permitted to intervene in this contested case hearing and respectfully requests that the Director and/or the Hearings Officer exercise their discretion to grant the BWS' Motion.

B. THE BWS HAS A DIRECT AND SUBSTANTIAL INTEREST IN THE OUTCOME OF THIS PROCEEDING

The BWS has a significant, direct interest in the outcome of this contested case hearing to both protect its customers and to fulfill its constitutional responsibilities. It is clear that the important interests of BWS' customers could be impacted by the outcome of this proceeding. The BWS was created by Act 96 of the 1929 Legislature and is a financially self-sufficient, semi-autonomous agency of the City and County of Honolulu. The BWS is the largest municipal drinking water utility in the State of Hawaii and is responsible for managing Oahu's municipal water resources and distribution system. *See* Kawata Decl. at ¶ 6. The BWS serves approximately 145 million gallons of potable water a day to roughly one million customers on Oahu. *See id*. at ¶ 7. To keep this water safe and flowing, the BWS must carefully and proactively manage its intricate system of approximately 2,100 miles of pipeline servicing nearly

every community on Oahu. *See id*. The BWS' ability to manage its resources has already been impacted by the fuel releases that are at issue in this proceeding and how future releases will be prevented is of critical importance to the BWS and its customers.

Further and importantly, Article XI, Section 9 of the Hawaii State Constitution guarantees the citizens of Hawaii the substantive "right to a clean and healthful environment." *See also Cnty. of Hawaii v. Ala Loop Homeowners*, 123 Haw. 391, 406-22, 235 P.3d 1103 (2010) *abrogated on other grounds by Tax Foundation of Hawaii v. State*, 144 Haw. 175, 189, 439 P.3d 127 (2019) (Article XI, Section 9 of the Hawaii State Constitution creates a private right of action as defined by laws relating to environmental quality). The BWS has a public trust responsibility to protect the water resources that it manages and preserve the rights of present and future generations in the waters of the State. *See* Kawata Decl. at ¶ 8. Public trust is the principle embedded in the Hawaii Constitution and State law that the Hawaii Supreme Court has consistently held obligates the state, including the BWS, to protect the purity of our water:

> "[T]he public trust doctrine applies to all water resources without exception or distinction. The state water resources trust thus embodies a dual mandate of 1) protection and 2) maximum reasonable and beneficial use. The public trust is, therefore, the duty and authority to maintain the purity and flow of our waters for future generations and to assure that the waters of our land are put to reasonable and beneficial uses."

Kauai Springs, Inc. v. Planning Comm'n of Cnty. Of Kauai, 133 Haw. 141, 172 (2014) (alteration and emphasis in original) (citations and internal quotation marks omitted). Moreover, this responsibility is "unlimited by any surface-ground distinction," extending to all water resources, including groundwater. *In re Water Use Permit Applications*, 94 Haw. 97, 133-135, 139 (2000). Given the enormous amount of fuel stored at the Red Hill facility, the location of this storage relative to our sole-source groundwater aquifer, the impacts that have already

occurred and the potential for further impacts to Oahu's critical drinking water resources, and the BWS' position as the utility responsible for providing residents with safe and dependable water service, the BWS has a unique and undeniable interest in the contested case hearing on the Emergency Order.

C. RESCINDING OR MODIFYING THE EMERGENCY ORDER WOULD IMPAIR BWS' ABILITY TO PROTECT ITS INTERESTS

The importance of the Emergency Order and the issues to be decided in this contested case cannot be overstated; it may well dictate whether Oahu's water will finally be protected or continued to be put at dire risk of contamination. That fuel release after fuel release from the Red Hill facility continues to occur – despite Navy assurances to the contrary – should no longer be a surprise. Our drinking water is imperiled now. Although testing conducted to date indicates that the water served from the BWS' drinking water wells remains compliant with standards for safe drinking water, sampling from under and around the Red Hill facility, including testing of the Navy's drinking water at its Red Hill Shaft, has demonstrated the existence of petroleum contamination in the very aquifer that the people of Oahu rely upon for clean drinking water. *See* Kawata Decl. at ¶¶ 34, 35. The release of fuel from the Red Hill facility has already caused the BWS to incur costs and take responsive actions to address the potential impacts to Oahu's drinking water. *See id*. at ¶ 22. Now the BWS has been forced to shut off its Halawa Shaft and its Halawa and Aiea wells, reducing its capacity to provide water service to its customers and ratepayers. *See id*. at ¶ 38. The issuance of the Emergency Order to defuel the Red Hill facility would provide relief to the BWS and its constituents by reducing the potential for further damage to Oahu's critical drinking water resources. *See id*. at ¶ 43. Failure to issue the order would directly impact the BWS' interests and threatens to continue to injure the BWS. *See id*. at ¶ 41.

The BWS seeks to intervene in this proceeding in order to protect this vital interest and thus intervention by the BWS is proper within the meaning of Hawaii Administrative Rules section 11-1-35.

D. BWS' INTERESTS ARE NOT ADEQUATELY REPRESENTED BY EXISTING PARTIES

As the agency charged with managing Oahu's municipal water resources and providing residents with safe and dependable water service, the BWS has a unique interest in the outcome of this proceeding that is not represented by the Navy, the DOH, or any other party of which the BWS is aware. The BWS' interests are averse to the Navy, which seeks to contest the Emergency Order. Likewise, the BWS' interest in managing Oahu's municipal water resources and distribution system is separate and distinct from those of the general public and/or the DOH. Accordingly, the BWS should be permitted to intervene in this contested case hearing.

E. BWS' INTERVENTION WILL NOT UNDULY DELAY THE CONTESTED CASE HEARING OR PREJUDICE THE ADJUDICATION OF THE RIGHTS OF THE ORIGINAL PARTIES

The BWS filed its motion to intervene as expeditiously as possible.[1] As far as the BWS is aware, this Motion was filed before a notice of the hearing has been posted publicly and before any substantive responsive statement has been filed by the Navy. Granting the instant motion to intervene in this contested case hearing will not delay the proceedings before the Director and/or the Hearings Officer and will not cause undue prejudice to any party. Moreover, the bases for the BWS' position and many of its substantive arguments on the issues to be addressed by the Director and/or the Hearings Officer have been set forth in the BWS' filings in connection with

[1] The BWS recognizes that the deadline for moving to intervene in a contested case is typically at least ten days before the hearing. But it has not even been ten days since the Emergency Order was issues. Moreover, due to the emergency nature of this proceeding, such notice was not possible. Indeed, the initial hearing was initially scheduled for the very next day after the Emergency Order was issued. Accordingly, the BWS' motion is timely.

the contested case on the Navy's Red Hill UST permit application (Dkt. No. 19-UST-EA-01), which both the Navy and the DOH have had an opportunity to review over the past two years. *See, e.g.*, Gannon Decl., Exhs. A, B. For the reasons stated herein, this intervention will not unduly delay the proceeding, hinder, or prejudice the rights of any party to the proceeding. To the contrary, the BWS should also be permitted to intervene because it can provide the Director and/or the Hearings Officer with subject matter expertise that is likely to assist in understanding complex technical issues relating to tank integrity, leak detection, corrosion protection, groundwater flow, contaminant fate and transport, and drinking water impacts that may inform the potential broader implications of a decision on the Emergency Order.

III. CONCLUSION

The BWS seeks to intervene in this proceeding to protect the BWS' substantial interests in the preservation of the irreplaceable sole-source groundwater aquifer that nourishes Oahu's drinking water supply. For the foregoing reasons, the BWS should be granted leave to intervene in this contested case hearing and should be treated as a party for purposes of this proceeding moving forward.

DATED: Honolulu, Hawaii, December 14, 2021.

DANA M.O. VIOLA
Corporation Counsel

By */s/ Jeff A. Lau*
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DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Emergency Order to UNITED STATES NAVY For Emergency Change-In-Service and Defueling of 20 Underground Storage Tanks, Red Hill Bulk Fuel Storage Facility	DOCKET NO. 21-UST-EA-02 DECLARATION OF ERWIN M. KAWATA

DECLARATION OF ERWIN M. KAWATA

1. I provide this written testimony as the Program Administrator of the Water Quality Division at the Honolulu Board of Water Supply (BWS) in the above-captioned contested case before the Hawaii Department of Health (DOH).

2. I have a Bachelor of Science degree in Chemistry and a certificate in Public Administration, both from the University of Hawaii at Manoa.

3. I have been employed by the BWS since 1982. My work over the past 39 years has been in the chemical, microbiological, biological, and radiological testing of the water served by the department and its compliance with all federal and state regulations for safe drinking water. My work also includes: providing technical guidance in the department's design and construction of water treatment facilities; managing the department's compliance with all environmental laws, rules and regulations that apply to its operations; and designing and managing environmental studies to identify and mitigate contamination that could impact the department's water resources and systems and all other scientific studies necessary to protect the quality of the department's water resources.

4. My work with groundwater contamination and its removal from the water began in 1985 when I analyzed water samples from BWS wells in Central Oahu for pesticide contamination and provided technical expertise in the design and operations of granular activated carbon treatment facilities.

5. Previous to these findings of groundwater contamination in Oahu, the possibility of pesticide and other contamination of groundwater in Hawaii was believed to be remote based on the theory that Oahu's soil and geology would prevent contamination from reaching the groundwater. Since then, a number of groundwater wells on Oahu, and the neighbor islands, have been found to contain pesticide contamination. The data has dramatically reshaped earlier understanding of the soil's protective properties and brought with it new understanding and concerns about the vulnerability of our island's aquifers to contamination by activities taking place on the surface of the land and in the subsurface.

HONOLULU BOARD OF WATER SUPPLY

6. The BWS is the largest municipal drinking water utility in the State of Hawaii and is responsible for managing Oahu's municipal water resources and distribution system. The department is a financially self-sufficient, semi-autonomous agency of the City and County of Honolulu. The BWS' stated mission is to provide safe, dependable, and affordable water now and into the future.

7. The BWS distributes an average of approximately 145 million gallons of potable water per day to around one million people on Oahu. To ensure the water it distributes is safe and potable, the BWS carefully and proactively manages its intricate system of approximately 2,100 miles of pipeline servicing nearly every community on Oahu.

8. The BWS has a Public Trust responsibility to protect the water resources that it manages. Public Trust is the principle embedded in the Hawaii Constitution and state law that recognizes that water is held in trust by the State of Hawaii for present and future generations. Pursuant to the Hawaii State Constitution, Article XI, Section 1, "[f]or the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals, and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people."

9. The Revised Charter of the City and County of Honolulu, Article VII, Sections 7-103 and 7-117, empowers the BWS to manage, control, and operate its water systems and infrastructure and to take appropriate legal actions to protect the State's drinking water resources and the interests of the BWS and its constituents.

RED HILL BULK FUEL STORAGE FACILITY (RHBFSF)

10. The RHBFSF is the state's largest field-constructed underground fuel tank complex, located in the south-central portion of the island of Oahu in Hawaii. It is owned and operated by the United States Department of the Navy (Navy). (Exhibit A.)

11. The RHBFSF is located approximately 2.5 miles northeast of Pearl Harbor on the island of Oahu and lies along the western edge of the Koolau Mountain Range situated on a topographic ridge that divides the Halawa Valley and the Moanalua Valley. The RHBFSF is bordered to the south by the Salt Lake volcanic crater and occupies approximately 144 acres of land. The surface topography varies from approximately 200 feet to 500 feet above mean sea level. (Exhibit B.)

12. The RHBFSF consists of twenty 12.5-million-gallon, field constructed, underground storage tanks (UST) constructed from 1940 to 1943. The USTs are 250 feet tall and 100 feet in diameter, with a domed top and base. The RHBFSF currently stores Jet Propulsion Fuel No. 5 (JP-5), Jet Propulsion Fuel No. 8 (JP-8), and marine diesel (F-76). Historic fuel storage has included diesel oil, Navy Special Fuel Oil, Navy distillate (ND), F-76, aviation gas, motor gas, JP-5, and JP-8. (Exhibit B.)

13. Currently, the RHBFSF contains 18 active and 2 inactive USTs operated by the Naval Supply Systems Command Fleet Logistics Center, Pearl Harbor, Hawaii. (Exhibit A.)

14. The USTs are constructed of concrete lined with steel. The dome is constructed of ½ inch steel and wall is ¼ inch steel. The reinforced concrete around the outside of the upper dome is 8 feet thick at the springline gradually narrowing to 4 feet thick at the crown. The reinforced concrete surrounding the lower dome is a minimum of 4 feet thick except for the 20 feet diameter flat bottom plate at the center of the lower dome which sits on top of a plug of concrete approximately 20 feet thick. The reinforced concrete surrounding the cylindrical barrel of the UST is an estimated minimum of 2.5 to 4 feet of concrete. The entire UST system is surrounded by basalt bedrock. (Exhibit C.)

15. The bottoms of the USTs are located approximately 100 feet above a groundwater aquifer used as a drinking water source by the BWS and the Navy. (Exhibit A.)

OAHU'S SOLE SOURCE AQUIFER

16. Groundwater in the area of the RHBFSF is on the boundary of the Waimalu and Moanalua Aquifer Systems of the Pearl Harbor and Honolulu Aquifer Sector, respectively. The aquifers are classified as basal, unconfined, flank-type and are currently used as a drinking water

source. The aquifers are fresh, with less than 250 milligrams per liter of chloride, and are an irreplaceable resource with a high vulnerability to contamination. (Exhibit D.)

17. The Oahu Sole Source Aquifer (also known as the Southern Oahu Basal Aquifer) includes the basal aquifer beneath the RHBFSF and is designated a Sole Source Aquifer in 1987 under Section 1424(e) of the Safe Drinking Water Act (52 Fed. Reg. 45496). Sole Source Aquifers are those that are the sole or principal drinking water source for an area, and which, if contaminated, would create a significant hazard to public health. (Exhibit E.)

18. The basal aquifer beneath the RHBFSF is the groundwater resource from which the BWS provides drinking water to residents and visitors from Moanalua to Hawaii Kai.

IMPACT TO BWS OF ACTUAL AND THREATENED FUEL RELEASES FROM THE RHBFSF

19. Numerous leaks from the RHBFSF USTs have been documented and sampling from under and around the RHBFSF has demonstrated the existence of petroleum contamination in the very aquifer that sustains our island's water supply.

20. In the course of refilling Tank 5 with JP-8 after scheduled maintenance in late 2013 and early 2014, a fuel release was discovered by the Navy. Filling of Tank 5 occurred between December 12, 2013 and January 6, 2014. During the filling, alarms were triggered but operators presumed the alarms were falsely activated and did not immediately react. The Navy also discovered an inventory discrepancy but did not verbally report the release to DOH until January 13, 2014. A release of an estimated 27,000 of JP-8 from Tank 5 was reported to DOH on January 23, 2014. (Exhibits A and F.)

21. The Navy did not immediately notify the BWS of the fuel release from Tank 5. The BWS learned of the Tank 5 fuel release from the DOH on January 13, 2014.

22. The fuel releases from the RHBFSF have caused the BWS to incur costs and take responsive actions to address the potential impacts to drinking water resources.

23. In response to the Tank 5 fuel release, the BWS had to stop pumping at certain of its well stations for several days, implement new, rigorous water quality testing protocols, and install a well designed to monitor groundwater quality in order to detect potential petroleum contamination from the RHBFSF. Specifically:

a. On January 14, 2014, the BWS shut off five of its well stations that are in close proximity to the RHBFSF. Four of those well stations remained offline until January 21, 2014. Approximately 300 additional staff hours were necessary to manage the well station shut down. The loss of the use of these wells during this period resulted in a corresponding loss of water production from these sources of approximately 80 million gallons.

b. On January 14, 2014, the BWS began performing additional water quality testing at the five well stations that are in close proximity to the RHBFSF. This water quality testing is in addition to, and goes above and beyond, the BWS' regular water quality testing. Weekly testing occurred in January 2014, monthly testing occurred in February and March 2014, and quarterly testing has occurred from April 2014 to the present. The total cost to the BWS for this additional water quality testing has exceeded $500,000.

c. On August 31, 2017, the BWS completed construction of a monitoring well at its Moanalua Reservoir No. 405 property designed to detect potential petroleum contamination from the RHBFSF. The total cost to the BWS for this monitoring well,

inclusive of design, permitting, construction, oversight, and reporting, was approximately $600,000.

24. In January 2014, the Navy entered into an Administrative Order on Consent (AOC) with the U.S. EPA and DOH, requiring the Navy to implement numerous activities to address fuel releases and implement infrastructure improvements to protect human health and the environment. The AOC, through its Scope of Work, recognizes the BWS as a Subject Matter Expert from which technical advice is to be sought for scoping and review of key deliverables.

25. I have toured the RHBFSF on January 29, 2014, March 10, 2014, April 10, 2014, April 14, 2014, September 15, 2015 and May 9, 2016. I witnessed the oily spot on the wall at the end of a tunnel in the vicinity of Tank 5 that was created by the fuel release reported in January 2014. (Exhibit G.)

26. I have been a participant in the various AOC technical meetings as a representative of BWS providing technical advice and recommendations to the EPA, DOH, and Navy in the areas of drinking water testing, the types and amounts of contaminants being detected, and water treatment technologies to remove contaminants from drinking water.

27. The BWS continues to engage experts to evaluate and provide written comment on Navy AOC deliverables and to evaluate and provide written comment on the Navy's Red Hill UST permit application. To date the BWS has submitted over 140 letters to the AOC parties and at least four written expert testimonies and/or reports to the DOH, contributing valuable expertise on issues with the potential to impact drinking water quality.

28. Over the past two years there have been several fuel releases into the environment from the pipelines at the RHBFSF. Specifically:

a. An active fuel release occurred at the RHBFSF's Hotel Pier from March 2020 through July 2021;

b. On May 6, 2021, a pressure surge resulted in the release of approximately 1,600 gallons of jet fuel from supply piping in the lower access tunnel tanks during the refilling of Tank 20;

c. A corrosion-induced hole in a pipeline lead to a fuel release at the RHBFSF's Kilo Pier on July 16, 2021; and

d. On November 20, 2021, a release of a supposed 14,000 gallons of a mixture of water and fuel occurred from the fire suppression system at the RHBFSF from the Navy's fire suppression system.

29. On October 26, 2021, the DOH issued the Navy a Notice of Violation and Order (NOVO No. 21-UST-EA-01) finding several violations of Hawaii law during a compliance inspection conducted from September 28, 2020 through October 8, 2020 and ordering the Navy to pay a $325,182 fine. (Exhibit H.)

30. As a direct result of the Navy's fuel releases into the environment, the BWS has devoted considerable time and resources to addressing the damage to our island's sole-source groundwater aquifer. I have personally spent thousands of hours attending to issues related to the fuel releases from the RHBFSF.

31. The Navy's fuel releases into the environment caused the BWS to incur costs well in excess of one million dollars ($1,000,000).

32. Based on previous site investigations and associated analytical data, numerous fuel releases dating back to at least 1947 have occurred at the RHBFSF, including the fuel

release from Tank 5 reported in January 2014 and fuel releases from RHBFSF pipelines in 2020 and 2021. (Exhibits I, J, and K.)

33. Other Navy studies also provide ample evidence of past releases, the corroding condition of the USTs' steel liners, the inaccuracy and unreliability of the Navy's tank inspection processes, the groundwater contamination underneath the USTs, and the risk to the drinking water aquifer. (Exhibits L, M, N, O, and Q.)

34. Groundwater testing data collected by the Navy since 2005 show petroleum contamination present in the groundwater and rocks underneath the RHBFSF. I graphed the Navy's groundwater monitoring well test results collected from February 2005 to the present that the Navy had analyzed for various petroleum related chemicals, including, but not limited to, total petroleum hydrocarbons as diesel (TPH-d), xylene, naphthalene, 2-methyl naphthalene, 3-methyl naphthalene and lead. These graphs show TPH-d levels as high as 6,300 micrograms per liter (µg/L) in Red Hill monitoring well #2 (RHMW2) in the groundwater underneath the RHBFSF USTs.

35. I have reviewed the laboratory reports from samples taken from the Navy's Red Hill Shaft on December 5, 2021. These laboratory reports show TPH-d levels as high as 140,000 µg/L in the Navy's Red Hill Shaft. (Exhibit P.)

36. The amount of TPH-d present in certain samples from the Navy's Red Hill Shaft, RHMW2, and other monitoring wells exceed existing DOH environmental action limits (EALs) for gross contamination and drinking water toxicity which are 500 µg/L and 400 µg/L respectively. The EAL is that amount below which the contaminants are assumed to not pose a significant threat to human health or the environment. (Exhibit R.)

37. The amount of TPH-d present in certain samples from the Navy's Red Hill Shaft, RHMW2, and other monitoring wells also exceeds the screening levels developed in connection with a toxicology assessment study conducted by the BWS. The study commissioned two experts in toxicology who independently calculated TPH-d screening levels of 210 µg/L and 162 µg/L, respectively. Screening levels are tools used to evaluate the threats posed by environmental contamination at a site. The screening levels are similar to drinking water standards and guidelines for TPH-d established by the States of Massachusetts and Minnesota. Screening levels, like EALs, are developed to be protective of public health and are used as the first step in assessing potential impacts on health from the groundwater contamination. (Exhibits S, T, U, and V.)

38. In response to the contamination detected in the Navy's Red Hill Shaft, the BWS had to again stop pumping at certain of its well stations, reinstitute rigorous water quality testing protocols, and begin planning for the installation of additional groundwater monitoring wells. Specifically, in December 2021, the BWS again shut off five of its well stations that are in close proximity to the RHBFSF, increased water quality testing at those five well stations from quarterly to weekly, and began the process for approving the construction of another groundwater monitoring well in Halawa Valley. The total cost to the BWS for these response actions is not yet known.

39. I agree with the past DOH statement that "it views the storage of up to 187 million gallons of fuel, 100 feet above a drinking water resource, is inherently dangerous." (Exhibit W.)

40. Based on my work experience at BWS and knowledge about the RHBFSF, I have concluded that the RHBFSF poses a risk to Oahu's groundwater aquifer and drinking water resources because of:

a. Its close proximity (100 feet) to the groundwater table and the groundwater's vulnerability to contamination;

b. The large volume (approximately 187 million gallons) of petroleum fuel stored in it;

c. Records of past fuel leaks in addition to the at least 27,000 gallons reported released in January 2014 from USTs that are corroding and more than 75 years old;

d. Records of recent fuel releases from RHBFSF pipelines, including the May 6, 2021 release of approximately 1,600 gallons of jet fuel from supply piping in the lower access tunnel tanks during the refilling of Tank 20, the 2020 and 2021 releases from the Hotel Pier and Kilo Pier pipelines fed by the RHBFSF, and the November 2021 release of a supposed 14,000 gallons of a mixture of water and fuel from the Navy's fire suppression system at the RHBFSF;

e. Destructive testing that has confirmed that the Navy cannot reliably and accurately find all the areas of the RHBFSF USTs that need repair;

f. A risk assessment report prepared by the Navy's own consultant that concludes that we can expect greater than a 27% probability of an acute, sudden release of up to 30,000 gallons each year from the RHBFSF and chronic, undetected fuel releases of 5,803 gallons per year, facility-wide;

g. The presence of petroleum contamination detected in the groundwater underneath the RHBFSF since at least 2005;

h. The presence of petroleum contamination detected in the Navy's Red Hill Shaft drinking water well in December 2021 at levels up to 350 times the DOH's EAL; and

i. The amount of contamination in the Navy's drinking water well and at least one area of the groundwater under the RHBFSF shows levels that may pose an unacceptable threat to human health and the environment.

41. I have reviewed the emergency order issued by the DOH to the Navy on December 6, 2021 requiring the Navy to immediately suspend fuel storage operations at the RHBFSF, expeditiously install a drinking water treatment system at the Navy's Red Hill Shaft drinking water well, and promptly take action to defuel the RHBFSF USTs (Emergency Order). (Exhibit H.) Failure to enforce the Emergency Order would directly impact the BWS' interests and threatens to continue to injure the BWS. Another fuel release to the environment from the RHBFSF will further contaminate with petroleum the sole-source groundwater aquifer beneath the RHBFSF, possibly causing irreparable damage to our critical drinking water resources.

42. The only way to ensure that our critical drinking water resources are protected from potential petroleum contamination is to defuel the RHBFSF and relocate the fuel to a new facility away from our sole-source groundwater aquifer.

43. Enforcement of the Emergency Order to ensure the RHBFSF is defueled and relocated would reduce the potential for further damage to our island's sole-source groundwater aquifer and would provide relief to the BWS and its constituents.

I, ERWIN M. KAWATA, do declare under the penalty of law that the foregoing is true and correct to the best of my knowledge.

DATED: Honolulu, Hawaii, December 14, 2021.

ERWIN M. KAWATA

EXHIBIT LIST

The following exhibits are incorporated by reference from *In the Matter of the Application of United States Navy for an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility*, Docket No. 19-UST-EA-01. All of the parties in this proceeding are parties to the above-referenced matter and have access to these documents.

Exhibit	Document Reference	Cross-Reference to Contested Case Record
A	Work Plan / Scope of Work, Investigation and Remediation of Releases and Groundwater Protection and Evaluation, Red Hill Bulk Fuel Storage Facility JOINT BASE PEARL HARBOR-HICKAM, O'AHU, HAWAI'I Administrative Order on Consent in the Matter of Red Hill Bulk Fuel Storage Facility, EPA Docket Number RCRA 7003-R9-2015-0l and DOH Docket Number 15-UST-EA-01, Attachment A, Statement of Work Section 6.2, Section 7.1.2, Section 7.2.2, and Section 7.3.2, January 4, 2017 Revision 02 (https://www.epa.gov/sites/production/files/2017-01/documents/revised_section_6-7_scope_of_work_4_january_2017.pdf)	B-1
B	Section 8.2: Risk/Vulnerability Assessment Scope of Work, Red Hill Bulk Fuel Storage Facility NAVSUP FLC, Pearl Harbor, HI (PRL), Joint Base Pearl Harbor-Hickam, Administrative Order on Consent In the matter of Red Hill Bulk Fuel Storage Facility EPA Docket No. RCRA 7003-R9-2015-01, DOH Docket No. 15-UST-EA-01, April 13, 2017 (https://www.epa.gov/sites/production/files/2017-04/documents/red_hill_risk_assessment_scope_of_work.pdf)	B-2
C	RED HILL FACILITY CORROSION AND METAL FATIGUE PRACTICES REPORT Administrative Order on Consent (AOC) and Statement of Work (SOW) Section 5.2. April 4, 2016 (https://www.epa.gov/sites/production/files/2016-07/documents/final_corrosion_and_metal_fatigue_practices_report_april_4_2016.pdf)	B-3
D	Mink, J. F., and L. S. Lau. 1990. Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawai'i. Technical Report No. 179. Honolulu, HI: Univ. of Hawaii, Water Resources Research Center. November 1987; rev. February 1990. (https://scholarspace.manoa.hawaii.edu/bitstream/10125/1961/wrrctr179.pdf)	B-4

E	Monitoring Well Installation Work Plan, Red Hill Bulk Fuel Storage Facility JOINT BASE PEARL HARBOR-HICKAM, O'AHU, HAWAI'I, July 17, 2016 Prepared for: Defense Logistics Agency Energy, 8725 John J Kingman Rd Suite 4950, Fort Belvoir, VA 22060-6222, Prepared by: AECOM Technical Services, Inc. 1001 Bishop Street, Suite 1600, Honolulu, HI 96813-3698 (https://www.epa.gov/ sites/production/files/2016-12/documents/revised_monitoring_well_installation_workplan_july_17_2016.pdf)	B-5
F	NAVFAC Naval Facilities Engineering Command Engineering and Expeditionary Warfare Center. SITE SPECIFIC REPORT, SSR-NAVFAC EXWC-CI-1655, 11 October 2016, Red Hill Facility, Tank Inspection, Repair, and Maintenance Report, Administrative Order on Consent (AOC) Statement of Work (SOW), Section 2.2. Prepared by Ms. Terri Regin, PE, Mr. Frank Kern, PE, Mr. James Gammon, and Mr. Lean-Miquel Sanpedro (https://www.epa.gov/sites/production/files/2016-10/documents/red-hill-aoc-section-2-2-tirm-report-2016-10-11.pdf)	B-6
G	Honolulu Star Advertiser. "More Tiny Holes Found in Leaking Red Hill Storage Tank." Photograph Courtesy of US Navy / Senior Chief Mass Communications Specialist Michael B. Lewis. June 22, 2014. (https://www.staradvertiser.com/2014/06/22/breaking-news/more-tiny-holes-found-in-leaking-red-hill-fuel-storage-tank/)	B-7
H	Notice of Violation and Order. State of Hawaii, Department of Health, Solid and Hazardous Waste Branch, Underground Storage Tank Section. NOVO No. 21-UST-EA-01. 26 October 2021.	New exhibit
I	2007. Red Hill Bulk Fuel Storage Facility Final Technical Report, Pearl Harbor, Hawaii. Prepared by TEC, Inc., Honolulu, HI. Prepared for Naval Facilities Engineering Command, Pacific, Pearl Harbor, HI. August.	B-8
J	2002. Red Hill Bulk Fuel Storage Facility Investigation Report (Final) for Fleet Industrial Supply Center (FISC), Oahu, Hawaii. Prepared by AMEC Earth & Environmental, Inc., Huntsville, AL. Prepared for Pacific Division, Naval Facilities Engineering Command, Pearl Harbor, HI. August.	B-9
K	Red Hill Bulk Fuel Storage Facility Final Groundwater Protection Plan, Pearl Harbor, Hawaii, Prepared for: Department of the Navy, Commander Naval Facilities Engineering Command, Pacific Pearl Harbor, HI 96860-3134, January 2008 (https://health.hawaii.gov/shwb/files/2014/08/2008-Final-Groundwater-Protection-Plan.pdf)	B-10

L	Naval Audit Service, 2010, Audit Report: Department of the Navy Red Hill and Upper Tank Farm Fuel Storage Facilities, Report Number N2010-0049, August 16, 2010.	B-11
M	Engineering Survey of U.S. Navy Petroleum Facilities at Pearl Harbor for U.S. Navy Bureau of Yards and Docks, May 1949, Bechtel Corporation.	B-12
N	Red Hill Complex Fire, Life Safety and Environmental Risk Assessment and Analysis by Willbros Engineers, Inc. dated August 1998.	B-13
O	NAVFAC Naval Facilities Engineering Command Engineering and Expeditionary Warfare Center. SITE SPECIFIC REPORT, SSR-NAVFAC EXWC-CI-1941, 7 July 2019, Red Hill Fuel Storage Facility, Destructive Testing Results Report, Administrative Order on Consent (AOC) Statement of Work (SOW), Section 5.3.3 (https://www.epa.gov/sites/production/files/2019-07/documents/red-hill-destructive-testing-results-report-20190707.pdf)	B-14
P	Analytical Report. Eurofins Calscience LLC. Environment Testing America. 9 December 2021.	New exhibit
Q	2018. Quantitative Risk and Vulnerability Assessment Phase 1 (Internal Events without Fire and Flooding). Red Hill Bulk Fuel Storage Facility NAVSUP FLC Pearl Harbor, HI (PRL). Administrative Order on Consent in the matter of Red Hill Bulk Fuel Storage Facility EPA Docket No. RCRA 7003-R9-2015_01, DOH Docket No. 15-UST-EA-01. Prepared by ABS Consulting. November 12.)	B-15
R	2017. Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater. Volume 2: Background Documentation for the Development of Tier 1 Environmental Action Levels. Appendix 1: Detailed Lookup Tables. Prepared by Hawaii Department of Health, Environmental Management Division. Page 39 of 152. Fall 2017. (https://health.hawaii.gov/heer/files/2019/11/Volume-2-App-1-HDOH-2017.pdf)	B-16
S	Development of Drinking Water Screening Levels for TPHs and Associated Chemicals, prepared for the Honolulu Board of Water Supply by Exponent, Inc., 1800 Diagonal Road, Suite 500, Alexandria, VA 22314, December 10, 2016	B-17
T	Calculation of Groundwater Screening Levels and a Groundwater Baseline Risk Assessment, prepared for Board of Water Supply by INTERA, Inc., 3240 Richardson Rd, Suite 2 Richland, Washington 99354, December 13, 2016	B-18

U	2020. Standards and Guidelines for Contaminants in Massachusetts Drinking Waters (https://www.mass.gov/doc/2020-standards-and-guidelines-for-contaminants-in-massachusetts-drinking-waters/download)	B-19
V	2017. Guidance for Evaluating Health Risks from Gasoline and Diesel Contaminated Drinking Water. Minnesota Department of Health. February. (https://www.health.state.mn.us/communities/environment/risk/docs/guidance/tphguidance.pdf)	B-20
W	2015. Report to the Twenty-Eighth Legislature State of Hawaii, 2015. Pursuant to Senate Concurrent Resolution 73 Requesting the Department of Health to Convent a Task Force to Study the effects of the January 2014 Fuel Tank Leak at the Red Hill Fuel Facility. Prepared by State of Hawaii Red Hill Fuel Storage Facility Task Force. December 2014. (https://health.hawaii.gov/shwb/files/2015/01/Senate-Concurrent-Resolution-73.pdf)	B-21

EXHIBIT H

STATE OF HAWAII
DEPARTMENT OF HEALTH
SOLID AND HAZARDOUS WASTE BRANCH
UNDERGROUND STORAGE TANK SECTION

NOTICE OF VIOLATION AND ORDER

TO: THE UNITED STATES DEPARTMENT OF THE NAVY c/o REAR ADMIRAL TIMOTHY KOTT COMMANDER NAVY REGION HAWAII 850 Ticonderoga St., Suite 110 JBPHH, Hawaii 96860-5101 Respondent	**NOVO No. 21-UST-EA-01** Re: Violations at the underground storage tank system located at Red Hill/Pearl Harbor-Hickam on the Island of Oahu, aka the Red Hill Bulk Fuel Storage Facility

This Notice of Violation and Order (NOVO) is an administrative enforcement action initiated pursuant to chapters 91 and 342L of the Hawaii Revised Statutes (HRS) and chapters 11-1 and 11-280.1 of the Hawaii Administrative Rules (HAR) by the DEPARTMENT OF HEALTH (the "Department") against THE UNITED STATES DEPARTMENT OF THE NAVY, c/o REAR ADMIRAL TIMOTHY KOTT, COMMANDER NAVY REGION HAWAII (the "Respondent") and is based upon violations observed during an inspection of the Red Hill Bulk Fuel Storage Facility (the "Facility") that was conducted during the period of September 28, 2020 to October 9, 2020 (the "Inspection") and the subsequent examination of information related thereto. Respondent is the owner and operator of the Facility. This NOVO concerns only the violations identified herein and does not function to preclude or limit actions by any public agency or private party. The Department reserves the right to bring other actions for other violations as may be necessary to protect public health and the environment.

I. NOTICE OF VIOLATION

Statutes/Rules	In accordance with the Resource Conservation and Recovery Act (RCRA) [*see* 42 U.S.C. sections 6991f and 6991g], the Department has authority to investigate federal underground storage tank (UST) facilities and to require immediate compliance with, and to assess an administrative penalty for violations of, chapter 342L, HRS, or any rule adopted pursuant thereto. **Section 342L-7(b), HRS,** states that: "For the purpose of developing or assisting in the development of any rule, conducting any study, investigating an actual or suspected release, monitoring for compliance or noncompliance with this chapter, any rule or standard adopted pursuant to this chapter, or any permit or variance issued pursuant to this chapter, taking release response action, or enforcing this chapter, any duly authorized representative of the department may: (1) Enter at reasonable times any establishment or place; (2) Inspect and obtain samples from any person of any regulated substances contained in any underground storage tank or tank system; (3) Conduct monitoring or testing of the tanks or tank systems, associated equipment, contents, or soils, air, surface water, or groundwater; and (4) Take release response action." **Section 342L-8(a), HRS,** states that: "If the Director determines that any person has violated or is violating this chapter, any rule adopted pursuant to this chapter, or any term or condition of a permit or variance issued pursuant to this chapter, the director may do one or more of the following:

(1) Issue an order assessing an administrative penalty for any past or current violation;
(2) Issue an order requiring compliance immediately or within a specified time; or
(3) Commence a civil action in the circuit environmental court in the circuit in which the violation occurred or the person resides or maintains the person's principal place of business for appropriate relief, including a temporary, preliminary, or permanent injunction, the imposition and collection of civil penalties, or other relief."

Section 342L-10(a), HRS, states that:
"Any person who violates this chapter, any rule adopted pursuant to this chapter, or any condition of a permit or variance issued pursuant to this chapter shall be fined not more than $25,000 for each individual tank for each day of each violation. Each day of each violation shall constitute a separate offense. In addition, any person who fails to comply with an order issued under this chapter within the time specified in the order shall be fined not more than $25,000 for each day of noncompliance with the order. Any action taken in environmental court to impose or collect the penalty provided for in this subsection shall be considered a civil action."

Section 11-280.1-31(1), HAR, requires that for metal UST systems with corrosion protection, the corrosion protection system must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

Section 11-280.1-33(a)(5), HAR, requires that prior to the return to use of a repaired UST system, any repaired piping that routinely contains product must pass a line tightness test in accordance with section 11-280.1-44(2).

The term "repair" means "to restore to proper operating condition a tank, pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, release detection equipment or other UST system component that has caused a release of product from the UST system or has failed to function properly." [section 11-280.1-12, HAR]

The line tightness test must be able to "detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure." [section 11-280.1-44(2), HAR]

Section 11-280.1-35(a)(1), HAR, requires that spill prevention equipment (such as a catchment basin, spill bucket, or other spill containment device) prevent releases to the environment by either being double walled and periodically monitored at least once every thirty-one (31) days, or being tested for liquid tightness at least once every three hundred sixty-five (365) days in a manner prescribed by the manufacturer, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, or as otherwise approved by the Department.

Section 11-280.1-36(a)(4), HAR, requires walkthrough inspections of hydrant pits to visually check for damage, remove liquid or debris, and check for any leaks at least once every thirty-one (31) days where confined space entry is not required.

Section 11-280.1-41(a)(2)(A), HAR, requires tanks installed before July 15, 2018 that are part of an airport hydrant fuel distribution system or a UST system with field-constructed tanks, and that are not field-constructed tanks with a capacity greater than 50,000 gallons, to be monitored for releases at least every thirty-one days using one of the methods listed in section 11-280.1-43(4) to (9), HAR.

Nature of the Violations	***Note: The counts below reflect only those violations for which a penalty has been assessed. The penalties assigned to each count, and instructions with respect to areas of non-compliance, are contained in the Order below. This NOVO is the result of a routine UST compliance inspection, is being addressed separate and apart from the contested case in DOH Docket No. 19-UST-EA-01, and is in no way meant to influence the final decision in that contested case. The inclusion of or omission from this NOVO of any area of potential non-compliance with chapter 11-280.1, HAR, that may also be subject to dispute in the contested case in Doc. No. 19-UST-EA-01 should not be interpreted as a declaration by the Department of a position in that other matter.*** **Count I:** At the time of Inspection, a device referred to by Respondent as Rectifier #10, intended to provide corrosion protection (via electrical current, i.e., "cathodic protection") for the underground pipeline running from the pump house to the aboveground storage tank referred to by Respondent as AST #55, was not in operation. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-31(1), HAR.* **Count II:** At the time of Inspection, the Respondent had failed to perform adequate line tightness testing on repaired piping prior to returning that piping to service. The repaired piping in question consisted of three (3) active lines identified as containing the fuels JP-5, F-24 and F-76 transporting fuel from the pump house to Hotel Pier (aka the "Hotel Pier" pipelines). Repairs, including but not limited to welding and other similar efforts, were made to improve the functionality of the pipelines. At the time of Inspection, however, Respondent had not performed a line tightness test at a leak rate of 0.1 gph in accordance with section 11-280.1-44(2) on any of the three (3) repaired Hotel Pier pipelines prior to their return to use. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-33(a)(5), HAR.* **Count III:** At the time of Inspection, Respondent had failed to test, at least annually and in a manner prescribed by the manufacturer, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, or as otherwise approved by the Department, the integrity of five (5) portable spill prevention equipment modules (i.e., catchments used to contain accidental drips during fuel receipts), located at the Facility's various piers and the Kuahua truck loading rack where fuel was routinely transferred from vehicles to the Facility. Additionally, Respondent failed to test, at least annually and in a manner prescribed by the manufacturer, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, or as otherwise approved by the Department, the integrity of four (4) fixed spill containment structures (concrete structures) located at the Hickam truck loading rack. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-35(a)(1), HAR.* **Count IV:** At the time of Inspection, Respondent had failed to perform an adequate walkthrough inspection by visually checking the Diamond Head Hydrant Loop pit 21D for damage, removing liquid or debris, and checking for any leaks at least every thirty-one (31) days. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-36(a)(4), HAR.*

	Count V: At the time of Inspection, Respondent was not utilizing any form of release detection for two (2) double-walled underground storage tanks referred to by Respondent as the Diamond Head (2,000 gal., installed on or about July 2010) and Ewa (4,000 gal., installed on or about May 2006) Product Recovery Tanks. Since these tanks were installed before July 15, 2018, are part of an airport hydrant fuel distribution system, and have a capacity of less than or equal to fifty thousand (50,000) gallons, they need to be monitored with release detection at least every thirty-one (31) days using one of the methods listed in section 11-280.1-43(4) to (9), HAR. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-41(a)(2)(A), HAR.*

II. ORDER

Respondent is hereby ordered to:

1. Within thirty (30) days of receipt of this NOVO, notify the Department of, and describe in detail, any and all corrective actions undertaken to remedy the violations described Counts I, III, IV, and V in this NOVO and any and all efforts to return the Facility to compliance with chapter 11-280.1, HAR.

2. Within thirty (30) days of receipt of this NOVO, submit to the Department for review and approval, a Work Plan and Implementation Schedule to correct the following areas of continued non-compliance:

    a) The violation contained, and described in more detail, in Count II.

    b) The Facility continues to repair USTs without performing an adequate tank tightness test. Per section 11-280.1-33(a), HAR, Respondent must "ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances." Further, section 11-280.1-33(a)(4), HAR, specifies that "[p]rior to the return to use of a repaired UST system, any repaired USTs must pass a tank tightness test in accordance with section 11-280.1-43(3)." Section 11-280.1-43(3), HAR, provides that "[t]ank tightness testing (or another test of equivalent performance) must be capable of detecting a **0.1 gallon per hour leak rate** from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table." (emphasis added). Respondent's process of "Clean, Inspect and Repair" (CIR) necessarily involves the repair of tanks, all of which must be tested for tightness in accordance with chapter 11-280.1, HAR. The tanks Respondent refers to as Tank No. 5 and the "surge tanks" are examples of USTs to which this chapter applies and which remain out of compliance with section 11-280.1-33(a) and 11-280.1-33(a)(4).

3. Upon the Department's approval of the Work Plan and Implementation Schedule, Respondent shall implement the Work Plan in accordance with the approved Implementation Schedule and work at the site shall commence no later than thirty (30) days after the Department's approval.

4. Pay an administrative penalty as follows for the above violations:

    a) Count I - Failure to provide corrosion protection in violation of section 11-280.1-31(1), HAR $30,000.00

    b) Count II - Failure to perform a line tightness test on three (3) active pipelines subsequent to repairs in violation of section 11-280.1-33(a)(5), HAR $179,982.00

c)	Count III - Failure to perform a liquid tightness test on spill prevention equipment in violation of section 11-280.1-35(a)(1), HAR	$22,950.00
d)	Count IV - Failure to perform an adequate walkthrough inspection in violation of section 11-280.1-36(a)(4), HAR	$2,250.00
e)	Count V - Failure to maintain adequate release detection in violation of section 11-280.1-41(a)(2)(A), HAR	$90,000.00

Total administrative penalty: $325,182.00

This NOVO becomes final and enforceable, and the penalty becomes due and payable, 20 days after your receipt of this NOVO, unless before the 20 days expire, you submit a written request for a hearing to the Hearings Officer, c/o Director of Health, Department of Health, 1250 Punchbowl Street, Third Floor, Honolulu, HI 96813 and to the Solid and Hazardous Waste Branch, Department of Health, 2827 Waimano Home Road #100, Pearl City, Hawaii 96782.

In any request for a hearing, please include a copy of this NOVO. At a hearing, you may seek to avoid any penalty, and the Department may seek the maximum penalty per day, per violation. Parties may present evidence and witnesses on their behalf, and may examine and cross-examine all witnesses and evidence presented by the Department. Parties may be represented by attorneys at their own expense, or they may represent themselves. Any hearing will be in accordance with chapter 91, HRS, and chapter 11-1, HAR. The final administrative penalty will be determined at the conclusion of the hearing and will be based upon all the evidence. The final penalty may be greater or less than that contained in this NOVO, or no penalty at all.

In lieu of a hearing, you may send a certified check or money order to the Underground Storage Tank Section of the Department of Health, 2827 Waimano Home Road #100, Pearl City, Hawaii 96782, within 20 days of your receipt of this NOVO, in an amount equal to the administrative penalty noted above and complete any corrective action required by this NOVO. This will satisfy the NOVO and terminate this administrative action. Upon receipt of the full penalty amount and confirmation of the satisfactory completion of any corrective action, the Department will notify you that this administrative action has been closed. Any certified check or money order should be made payable to the "State of Hawaii" and include the NOVO reference number.

If you have questions, please call Lene Ichinotsubo, P.E., Acting Chief of the Solid and Hazardous Waste Branch at (808) 586-4226. If you have special needs due to a disability and require accommodation to aid you in participating in the hearing or pre-hearing conference, please contact the Hearings Officer at (808) 586-4409 (voice) or through the Telecommunications Relay Service (711), at least ten (10) working days before the hearing or pre-hearing conference date.

DATED: Honolulu, Hawaii October 26, 2021

DEPARTMENT OF HEALTH
STATE OF HAWAII

Kathleen Ho

KATHLEEN S. HO
Deputy Director for Environmental Health

APPROVED AS TO FORM:

Wade H. Hargrove III
Deputy Attorney General

EXHIBIT P

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-77793-1
Client Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

For:
Eurofins Eaton Analytical
750 Royal Oaks Drive
Monrovia, California 91016

Attn: Jaclyn Contreras

Authorized for release by:
12/9/2021 6:45:09 PM

Xuan Dang, Project Manager I
(714)895-5494
Xuan.Dang@eurofinset.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 570-77793-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-77793-1

Comments
No additional comments.

Receipt
The samples were received on 12/7/2021 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.9º C.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Eurofins Eaton Analytical
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

Job ID: 570-77793-1

Client Sample ID: 202112080185 — Lab Sample ID: 570-77793-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
C9-C10	20000		2400		ug/L	50		8015B	Total/NA
C11-C12	66000		2400		ug/L	50		8015B	Total/NA
C13-C14	47000		2400		ug/L	50		8015B	Total/NA
C15-C16	10000		2400		ug/L	50		8015B	Total/NA
C17-C18	3100		2400		ug/L	50		8015B	Total/NA
C6-C44	140000		2400		ug/L	50		8015B	Total/NA
Gasoline Range Organics [C6 - C10]	20000		2400		ug/L	50		8015B	Total/NA
Diesel Range Organics [C10-C28]	140000		2400		ug/L	50		8015B	Total/NA

Client Sample ID: 202112080186 — Lab Sample ID: 570-77793-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
C6-C44	63		49		ug/L	1		8015B	Total/NA
Oil Range Organics (C28-C40)	49		49		ug/L	1		8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: 202112080185
Date Collected: 12/05/21 14:00
Date Received: 12/07/21 10:20

Lab Sample ID: 570-77793-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C7 as C7	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C8 as C8	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C9-C10	**20000**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C11-C12	**66000**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C13-C14	**47000**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C15-C16	**10000**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C17-C18	**3100**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C19-C20	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C21-C22	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C23-C24	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C25-C28	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C29-C32	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C33-C36	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C37-C40	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C41-C44	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
C6-C44	**140000**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
Gasoline Range Organics [C6 - C10]	**20000**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
Diesel Range Organics [C10-C28]	**140000**		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50
Oil Range Organics (C28-C40)	ND		2400		ug/L		12/08/21 09:47	12/09/21 15:54	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*91*		*53 - 151*	*12/08/21 09:47*	*12/09/21 15:54*	*50*

Client Sample ID: 202112080186
Date Collected: 12/05/21 15:24
Date Received: 12/07/21 10:20

Lab Sample ID: 570-77793-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C7 as C7	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C8 as C8	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C9-C10	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C11-C12	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C13-C14	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C15-C16	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C17-C18	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C19-C20	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C21-C22	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C23-C24	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C25-C28	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C29-C32	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C33-C36	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C37-C40	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C41-C44	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
C6-C44	**63**		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
Gasoline Range Organics [C6 - C10]	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
Diesel Range Organics [C10-C28]	ND		49		ug/L		12/08/21 09:47	12/08/21 17:07	1
Oil Range Organics (C28-C40)	**49**		49		ug/L		12/08/21 09:47	12/08/21 17:07	1

Client: Eurofins Eaton Analytical
Job ID: 570-77793-1
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	98		53 - 151	12/08/21 09:47	12/08/21 17:07	1

Surrogate Summary

Client: Eurofins Eaton Analytical
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

Job ID: 570-77793-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	**Client Sample ID**	**OTCSN1 (53-151)**
570-77793-1	202112080185	91
570-77793-2	202112080186	98
LCS 570-199439/2-A	Lab Control Sample	97
LCSD 570-199439/3-A	Lab Control Sample Dup	94
MB 570-199439/1-A	Method Blank	94

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 570-199439/1-A
Matrix: Water
Analysis Batch: 199489

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199439

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C6 as C6	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C7 as C7	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C8 as C8	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C9-C10	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C11-C12	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C13-C14	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C15-C16	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C17-C18	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C19-C20	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C21-C22	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C23-C24	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C25-C28	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C29-C32	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C33-C36	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C37-C40	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C41-C44	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
C6-C44	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
Gasoline Range Organics [C6 - C10]	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
Diesel Range Organics [C10-C28]	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1
Oil Range Organics (C28-C40)	ND		50		ug/L		12/08/21 09:47	12/08/21 13:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*94*		*53 - 151*	*12/08/21 09:47*	*12/08/21 13:16*	*1*

Lab Sample ID: LCS 570-199439/2-A
Matrix: Water
Analysis Batch: 199489

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199439

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			4000	4632		ug/L		116	70 - 131		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*97*		*53 - 151*

Lab Sample ID: LCSD 570-199439/3-A
Matrix: Water
Analysis Batch: 199489

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 199439

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			4000	4573		ug/L		114	70 - 131	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*94*		*53 - 151*

QC Association Summary

Client: Eurofins Eaton Analytical
Job ID: 570-77793-1
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

GC Semi VOA

Prep Batch: 199439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-77793-1	202112080185	Total/NA	Water	3510C	
570-77793-2	202112080186	Total/NA	Water	3510C	
MB 570-199439/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-199439/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-199439/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 199489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-77793-2	202112080186	Total/NA	Water	8015B	199439
MB 570-199439/1-A	Method Blank	Total/NA	Water	8015B	199439
LCS 570-199439/2-A	Lab Control Sample	Total/NA	Water	8015B	199439
LCSD 570-199439/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	199439

Analysis Batch: 199804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-77793-1	202112080185	Total/NA	Water	8015B	199439

Lab Chronicle

Client: Eurofins Eaton Analytical
Job ID: 570-77793-1
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

Client Sample ID: 202112080185
Lab Sample ID: 570-77793-1
Date Collected: 12/05/21 14:00
Matrix: Water
Date Received: 12/07/21 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			260.9 mL	2.5 mL	199439	12/08/21 09:47	UFLU	ECL 1
Total/NA	Analysis	8015B		50			199804	12/09/21 15:54	N5Y3	ECL 1
	Instrument ID: GC48									

Client Sample ID: 202112080186
Lab Sample ID: 570-77793-2
Date Collected: 12/05/21 15:24
Matrix: Water
Date Received: 12/07/21 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			255.6 mL	2.5 mL	199439	12/08/21 09:47	UFLU	ECL 1
Total/NA	Analysis	8015B		1			199489	12/08/21 17:07	N5Y3	ECL 1
	Instrument ID: GC48									

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: Eurofins Eaton Analytical
Job ID: 570-77793-1
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

Laboratory: Eurofins Calscience LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-30-22
Oregon	NELAP	CA300001	01-30-22

Method Summary

Client: Eurofins Eaton Analytical
Job ID: 570-77793-1
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

Method	Method Description	Protocol	Laboratory
8015B	Diesel Range Organics (DRO) (GC)	SW846	ECL 1
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	ECL 1

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 1 = Eurofins Calscience LLC Lincoln, 7440 Lincoln Way, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: Eurofins Eaton Analytical
Project/Site: 973582 - RED-HILL-INCIDENT (Red Hill)

Job ID: 570-77793-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-77793-1	202112080185	Water	12/05/21 14:00	12/07/21 10:20
570-77793-2	202112080186	Water	12/05/21 15:24	12/07/21 10:20

Loc 570
77793

CHAIN OF CUSTODY RECORD

eurofins
Eaton Analytical

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone 626 386 1100
Fax 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY. _____

SAMPLES LOGGED IN BY. _____

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

SAMPLE TEMP RECEIVED AT:
☐ Colton / No California / Arizona _____ °C (Compliance 4 ± 2 °C)
☐ Monrovia _____ °C (Compliance 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice _____ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME:	PROJECT CODE.	COMPLIANCE SAMPLES (check for yes) ☐	NON-COMPLIANCE SAMPLES (check for yes) ☐ x
State of Hawaii DOH	HAWAII-DOH	- Requires state EDD ☐	REGULATION INVOLVED Response Sampling (eg. SDWA, Phase V NPDES, FDA,)
		Type of samples (circle one) ROUTINE SPECIAL CONFIRMATION	

EEA CLIENT CODE:	Job#	SAMPLE GROUP:	SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR
HAWAII	P-CARD	RED-HILL-INCIDENT	list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

Standard TAT STD __ 1 wk __ 3 dayX_ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX	Field pH	Source Temp (Celsius)	TPH 8015 Deisel and Motor oil	TPH 8015 Deisel and Motor oil (chlorinated)	SAMPLER COMMENTS
12-05-21	2:00pm	Red Hill Shaft		Water			1		
12-05-21	3:24pm	Red Hill Upper Storage Tank		Water				1	Bill and Report to EEA-Monrovia
		MS							
		MSD							

570-77793 Chain of Custody

* **MATRIX TYPES:** **RSW** = Raw Surface Water; **RGW** = Raw Ground Water; **CFW** = Chlor(am)inated Finished Water; **FW** = Other Finished Water; **SEAW** = Sea Water; **WW** = Waste Water; **BW** = Bottled Water; **SW** = Storm Water; **SO** = Soil; **SL** = Sludge; **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	Liz Galvez	Liz Galvez	Hawaii Department of Health	12-05-21	3 24pm
RELINQUISHED BY:	Liz Galvez	Liz Galvez	Hawaii Department of Health	12-06-21	10 30am
RECEIVED BY:		PREGY VICENTE	PV 12/7/21	12/7/21	10:20
RELINQUISHED BY:					
RECEIVED BY:					

3.0/3.9 SCS

PAGE ____ OF ____

12/9/2021

eurofins | Eaton Analytical

Ship To:
`Eurofins CalScience
7440 Lincoln Way

Garden Grove, CA 92641-1432

Phone: 714-895-5494 Fax: 714-894-7501

Folder #: 973582 **Report Due:** 12/21/2021

Submittal Form

Date: 12/8/2021

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **973582** Job # **1000014**

Report all quality control data according to Method, Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: Eaton-MonroviaSubContract@eurofinset.com
Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical, LLC
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified StateCertification # and Exp Date for requested tests + matrix.

Samples from: **HAWAII**

rush

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID
202112080185	Red Hill Shaft	12/05/21 1400	water		JLS

Sample type: **Sample Event:** **Facility ID:** **Sample Point ID:** **Static ID:** Extractable

Method	Prep Method	Analysis Requested
8015B	EPA 3510C	Gas, Diesel, and Motor Oil Organics
8015B M	EPA 3510C	6257_8015B(M) C6-C44

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID
202112080186	Red Hill Upper Storage Tank	12/05/21 1524	water		JLS

Sample type: **Sample Event:** **Facility ID:** **Sample Point ID:** **Static ID:**

Method	Prep Method	Analysis Requested
8015B	EPA 3510C	Gas, Diesel, and Motor Oil Organics
8015B M	EPA 3510C	6257_8015B(M) C6-C44

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

ORIGIN ID:NAXA (808) 586-4258
SEILA ARONI
DEPARTMENT OF HEALTH/SDWB
2385 WAIMANO HOME RD
ULUAKUPU BLDG. 4
PEARL CITY, HI 96782
UNITED STATES US

SHIP DATE: 06DEC21
ACTWGT: 20.00 LB
CAD: 101971153/INET4400
DIMS: 16x12x14 IN

BILL SENDER

TO XUAN DANG
EUROFINS CALSCIENCE
7440 LINCOLN WAY
GARDEN GROVE CA 92641
(714) 895-5494
REF
INV
PO
DEPT

56DJ3/E934/FE4A

FedEx Express

J212221810801uw

TUE - 07 DEC 11:30A
PRIORITY OVERNIGHT

3 of 8
MPS# 7754 0703 6964
Mstr# 7754 0703 7710

0263
0201

WZ APVA

92641
SNA
CA-US

After printing this label
1 Use the 'Print' button on this page to print your label to your laser or inkjet printer
2 Fold the printed page along the horizontal line
3 Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned

Warning IMPORTANT. TRANSMIT YOUR SHIPPING DATA AND PRINT A MANIFEST
At the end of each shipping day, you should perform the FedEx Ground End of Day Close procedure to transmit your shipping data to FedEx To do so, click on the Ground End of Day Close Button. If required, print the pickup manifest that appears A printed manifest is required to be tendered along with your packages if they are being picked up by FedEx Ground If you are dropping your packages off at a FedEx drop off location, the manifest is not required
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide and applicable tariff, available upon request FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim Limitations, including limitations on our liability, can be found in the current FedEx Service Guide and applicable tariff apply. In no event shall FedEx Ground be liable for any special, incidental, or consequential damages, including, without limitation, loss of profit, loss to the intrinsic value of the package, loss of sale, interest income or attorney's fees, Recovery cannot exceed actual documented loss Items of extraordinary value are subject to separate limitations of liability set forth in the Service Guide and tariff Written claims must be filed within strict time limits, see current FedEx Service Guide

570-77793 Waybill

77793

ORIGIN ID:NAXA (808) 586-4258
SEILA ARONI
DEPARTMENT OF HEALTH/SDWB
2385 WAIMANO HOME RD
ULUAKUPU BLDG 4
PEARL CITY, HI 96782
UNITED STATES US

SHIP DATE: 06DEC21
ACTWGT: 20.00 LB
CAD: 101971153/INET4400
DIMS: 16x12x14 IN

BILL SENDER

TO **XUAN DANG**
EUROFINS CALSCIENCE
7440 LINCOLN WAY

GARDEN GROVE CA 92641
(714) 895-5494
INV
PO
REF
DEPT

56DJ3/E934/FE4A

FedEx Express

J212221101801uv

TUE - 07 DEC 11:30A
PRIORITY OVERNIGHT

3 of 8
MPS# 7754 0703 6964
Mstr# 7754 0703 7710

0263
0201

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92641
SNA
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77793

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EUROFINS EATON ANALYTICAL USE ONLY

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: _____

SAMPLES LOGGED IN BY: _____

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

SAMPLE TEMP RECEIVED AT:

☐ Colton / No California / Arizona _____ °C (Compliance 4 ± 2 °C)

☐ Monrovia _____ °C (Compliance 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice _____ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME	PROJECT CODE
State of Hawaii DOH	HAWAII-DOH

EEA CLIENT CODE	Job#	SAMPLE GROUP
HAWAII	P-CARD	RED-HILL-INCIDENT

Standard TAT STD __ 1 wk __ 3 dayX_ 2 day ___ 1 day ___

(check for yes) **COMPLIANCE SAMPLES** ☐ - Requires state EDD ☐

(check for yes) **NON-COMPLIANCE SAMPLES** x

REGULATION INVOLVED: Response Sampling (eg. SDWA, Phase V NPDES, FDA,)

Type of samples (circle one). **ROUTINE SPECIAL CONFIRMATION**

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), *OR*

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX	Field pH	Source Temp (Celsuis)	TPH 8015 Deisel and Motor oil	TPH 8015 Deisel and Motor oil (chlorinated)	SAMPLER COMMENTS
12-6-21	1100	Aliamanu Child Development Center		Water			1		Bill and Report to EEA-Monrovia
		MS							
		MSD							

570-77794 Chain of Custody

results via Cron -excel compatible

*** MATRIX TYPES:** **RSW** = Raw Surface Water **RGW** = Raw Ground Water **CFW** = Chlor(am)inated Finished Water **FW** = Other Finished Water **SEAW** = Sea Water **WW** = Waste Water **BW** = Bottled Water **SW** = Storm Water **SO** = Soil **SL** = Sludge **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY		Isaiah Kela-Pacheco	Hawaii Department of Health	12-6-21	1100
RELINQUISHED BY		Isaiah Kela-Pacheco	Hawaii Department of Health	12-6-21	1320
RECEIVED BY		PROTECTIVE	EC	12/7/21	10:20
RELINQUISHED BY					
RECEIVED BY					

PAGE ____ OF ____

2-0/2-9 SCT

12/9/2021

Login Sample Receipt Checklist

Client: Eurofins Eaton Analytical

Job Number: 570-77793-1

Login Number: 77793
List Number: 1
Creator: Vitente, Precy

List Source: Eurofins Calscience LLC

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Emergency Order to UNITED STATES NAVY For Emergency Change-In-Service and Defueling of 20 Underground Storage Tanks, Red Hill Bulk Fuel Storage Facility	DOCKET NO. 21-UST-EA-02 DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A THROUGH B

DECLARATION OF ELLA FOLEY GANNON

I, ELLA FOLEY GANNON, declare as follows:

1. I am a partner with Morgan, Lewis & Bockius LLP representing Petitioner Honolulu Board of Water Supply ("BWS") in the above-entitled action. I am an attorney licensed to practice law before all State and Federal courts of the State of California and currently admitted to practice *pro hac vice* in Hawaii.

2. I make this Declaration in support of the Motion for Leave to Intervene of Honolulu Board of Water Supply. I make this declaration based upon personal knowledge and I am competent to testify as to all matters stated herein.

3. Attached hereto as Exhibit A is a true and correct copy of Petitioner Honolulu Board of Water Supply's Post-Hearing Memorandum as well as its Proposed Findings of Fact, Conclusions of Law, and Recommended Decision, which was electronically filed with the Department of Health and served on the Navy in connection with the Navy's Red Hill UST

permit application (Dkt. No. 19-UST-EA-01) on July 13, 2021.

4. Attached hereto as Exhibit B is a true and correct copy of Petitioner Honolulu Board of Water Supply's Supplement to Memorandum in Support of the Environmental Health Administration's Motion for the Reopening of the Hearing and Amended Motion, which was electronically filed with the Department of Health and served on the Navy in connection with the Navy's Red Hill UST permit application (Dkt. No. 19-UST-EA-01) on November 23, 2021.

5. I declare under penalty of perjury that the foregoing facts are true and correct to the best of my knowledge and belief.

DATED: San Francisco, California, December 14, 2021.

/s/ Ella Foley Gannon
ELLA FOLEY GANNON

EXHIBIT A

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DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of UNITED STATES NAVY For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	DOCKET NO. 19-UST-EA-01 PETITIONER HONOLULU BOARD OF WATER SUPPLY'S POST-HEARING MEMORANDUM; PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDED DECISION; CERTIFICATE OF SERVICE

PETITIONER HONOLULU BOARD OF WATER SUPPLY'S POST-HEARING MEMORANDUM

The evidence and testimony presented in this contested case proceeding before the Hawaii Department of Health ("DOH") is clear – the United States Department of the Navy ("Navy") has not and cannot operate the Red Hill Bulk Fuel Storage Facility ("Red Hill") in compliance with Hawaii law. Neither its permit application nor the evidence and testimony the Navy has presented in support of its application demonstrate that Red Hill can be operated to prevent releases for its operational life, that the Red Hill underground storage tanks ("USTs") are adequately protected from corrosion, or that operations at Red Hill meet the regulatory requirements for leak detection. To the contrary, the Navy could not even prevent a fuel release into the environment in the three months following the contested case hearing itself. It still has not employed any of the UST corrosion protection measures required by DOH rules. Navy witnesses acknowledge that it cannot meet the minimum leak detection rate required by State law when returning a repaired UST back into service. And the Navy's own expert concedes that operations at Red Hill have already contaminated the irreplaceable sole-source groundwater aquifer that nourishes Oahu's drinking water supply. Operations at Red Hill simply are not protective of human health and the environment. The DOH's public trust responsibility to safeguard all of Hawaii's water resources, including groundwater, precludes it from granting the Navy a UST operating permit for Red Hill. Accordingly, the DOH has no choice but to deny the Navy's permit application and require that the Navy immediately relocate the Red Hill USTs away from Oahu's sole-source groundwater aquifer or upgrade them with tank-within-a-tank secondary containment.

I. INTRODUCTION AND SUMMARY OF RELEVANT FACTS

At the conclusion of this contested case, the Hearings Officer will recommend, and the Director of Health will decide, whether to grant or deny the Navy's application for a permit to operate the Red Hill facility. As set forth in greater detail in the BWS' pre-hearing brief, the Navy stores nearly 200 million gallons of fuel at Red Hill in 18 colossal World War II vintage USTs a mere 100 feet above the federally designated sole-source groundwater aquifer from which the BWS provides drinking water to residents from Moanalua to Hawaii Kai. *See* Updated Written Testimony of Erwin M. Kawata ("Kawata Test.") at ¶¶ 15, 18; Exhibit B-1; *see also* Written Reply Testimony of Nicole M. DeNovio, ¶ 3.b, Report: Sole Source Aquifer, Reply Testimony, 3. Numerous episodic releases from the Red Hill USTs have occurred and sampling from under and around Red Hill has demonstrated the existence of petroleum contamination in the very aquifer that sustains Oahu's water supply. *See* Second Updated Written Testimony of Nicole M. DeNovio ("DeNovio Test."), ¶ 9.b, Report: Evaluation of Hydrogeology, Groundwater Flow and Contaminant Fate and Transport, Red Hill Bulk Fuel Storage Facility ("DeNovio Expert Report"), i, 3, 20-36, tbl. 1.1-1. At least 73 fuel release incidents at Red Hill have been documented, including a Navy reported release of approximately 27,000 gallons of jet fuel from Tank 5 in January 2014 and a release of approximately 1,000 gallons of jet fuel from supply piping in the lower access tunnel underneath the Red Hill USTs during the refilling of Tank 20 on May 6, 2021, involving more than 175,000 total gallons of product. *See* Updated Written Testimony of David M. Norfleet ("Norfleet Test."), Expert Report: Evaluation of Underground Storage Tanks at the Red Hill Bulk Fuel Storage Facility ("Norfleet Expert Report"), 8, app. C; Updated Supplemental Written Testimony of Nicole M. DeNovio ("Supp. DeNovio Test."), ¶¶ 7-8: Exhibit B-407. In September 2015, the Navy entered into an

administrative order ("AOC") with the EPA and the DOH requiring the Navy to conduct certain investigations and other work "necessary to address potential impacts to human health, safety and the environment … due to historical, recent and potential future releases at the [Red Hill] Facility." Exhibit B-81 at BWS008935.

Effective July 15, 2018, the DOH adopted HAR Chapter 11-280.1, which for the first time required large field-constructed USTs like those at Red Hill[1] be subject to permitting requirements by July 15, 2019. HAR §§ 280.1-10(a)(1)(A), 280.1-323(a).[2] By letter received by the DOH on May 23, 2019, as corrected June 12, 2019, the Navy submitted its operative application seeking a permit to operate the Red Hill USTs. *See* Exhibits B-77, B-246 through 252, and B-301 through 304. On June 24, 2019, the BWS submitted to the DOH written comments on the Navy's permit application, making clear that "it is not appropriate for the DOH to issue an operating permit" for the USTs at Red Hill. Exhibit B-22 at BWS006291. By letter and complaint dated October 29, 2019, the BWS requested a contested case hearing concerning

[1] Federal facilities are required to comply with all federal, state, interstate, and local solid and hazardous waste requirements (including statutes, regulations, permits, reporting requirements, and administrative and judicial orders and injunctions). The express waiver sovereign immunity contained in the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et seq*., subjects the Navy to the same substantive and procedural requirements as any person under state laws regulating USTs. *See* 42 U.S.C. § 6991f(a) ("Each department, agency, and instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any underground storage tank or underground storage tank system, or (2) engaged in any activity resulting, or which may result, in the installation, operation, management, or closure of any underground storage tank, release response activities related thereto, or in the delivery, acceptance, or deposit of any regulated substance to an underground storage tank or underground storage tank system shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive relief and such sanctions as may be imposed by a court to enforce such relief), respecting underground storage tanks in the same manner, and to the same extent, as any person is subject to such requirements, including the payment of reasonable service charges. The Federal, State, interstate, and local substantive and procedural requirements referred to in this subsection include, but are not limited to, all administrative orders and all civil and administrative penalties and fines, regardless of whether such penalties or fines are punitive or coercive in nature or are imposed for isolated, intermittent, or continuing violations. The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge.").

[2] Hawaii Revised Statutes § 342L-32(b)(3) required existing USTs to be replaced or upgraded by December 22, 1998, but field-constructed USTs were largely exempted from DOH's UST rules until July 15, 2018.

the Navy's permit application. Kawata Test. at ¶ 37; Exhibit B-23.[3] As the largest municipal drinking water utility in Hawaii, the BWS has standing to bring this contested case because it has a significant interest in the outcome of the permitting decision. *See* Pet'r Honolulu Board of Water Supply's Pre-Hr'g Mem. at 3-4 (Jan. 19, 2021); *see also* Kawata Test. at ¶¶ 22-28, 37-38, 41. The BWS is obligated to oppose the Navy's permit application to protect the water resources it manages and to preserve the rights of present and future generations in the waters of Hawaii.

II. LEGAL AND REGULATORY FRAMEWORK FOR THE PERMITTING DECISION

The DOH must protect Oahu's drinking water from the clear and present danger posed by the Navy's operations at Red Hill. The Hawaii Constitution guarantees that "[a]ll public natural resources are held in trust for the benefit of the people" and directs the State, and by extension the DOH, "to protect, control and regulate the use of Hawaii's water resources for the benefit of its people." Haw. Const. art. XI, §§ 1, 7. Both the BWS and the DOH have a public trust responsibility to protect the water resources that they manage and to preserve the rights of present and future generations in the waters of the State. Public trust is the principle embedded in the Hawaii Constitution and State law that obligates the State, including the BWS and DOH, to protect the purity of Hawaii's water:

> [T]he public trust doctrine applies to <u>all water resources</u> without exception or distinction. The state water resources trust thus embodies a dual mandate of 1) protection and 2) maximum reasonable and beneficial use. The public trust is, therefore, the duty and authority to maintain the purity and flow of our waters for future generations and to assure that the waters of our land are put to reasonable and beneficial uses.

[3] The Navy's permit application package, as corrected, consisted of ten enclosures: the permit application itself and nine supporting documents. Of these nine supporting documents, six were initially redacted either in part or in full. The BWS' written comments and contested case request were based on the publicly-available information only. In connection with this contested case, the Navy subsequently produced its permit application with some, but not all, of these redactions removed.

Kauai Springs, Inc. v. Planning Comm'n of Cnty. of Kauai, 133 Haw. 141, 172, 324 P.3d 951 (2014) (alteration and emphasis in original) (citations and internal quotation marks omitted). The Supreme Court of Hawaii has made clear that this responsibility is "unlimited by any surface-ground distinction," extending to all water resources, including groundwater. *In re Water Use Permit Applications*, 94 Haw. 97, 133-135, 139, 9 P.3d 409 (2000).

State policy for water resources in Hawaii is likewise directed toward achieving the highest water quality consistent with maximum benefit to the people of the State and "shall be liberally interpreted to obtain maximum beneficial use of the waters of the State …." H.R.S. § 174C-2(c). Pertinent here, drinking water is the highest beneficial use of groundwater. State law governing underground storage tanks only serves to bolster these public trust commitments, expressly providing that underground storage tank systems "shall be designed, constructed, installed, upgraded, maintained, repaired, and operated *to prevent releases of the stored regulated substances for the operational life of the tank or tank system* …." H.R.S. § 342L-32(b)(1) (emphasis added).

The DOH's UST regulations recognize that compliance with the requirements of Chapter 342L of the Hawaii Revised Statutes is a prerequisite for the issuance of a permit to operate. *See* HAR § 280.1-323(c). These regulations are careful to further limit the agency's authority to approve permit applications "only if the applicant has submitted sufficient information to the satisfaction of the director that the technical, financial, and other requirements of this chapter are or can be met and the installation and operation of the UST or tank system will be done in a manner that is protective of human health and the environment"; the regulations authorize the DOH to impose conditions on a permit where "reasonably necessary to ensure compliance with

this chapter and any other relevant state requirement, including conditions relating to equipment, work practice, or operation." HAR §§ 280.1-323(b), 280.1-328.

III. NAVY OPERATIONS AT RED HILL DO NOT COMPLY WITH LAW

The Navy has failed to meet its burden. As the applicant for a permit to operate the Red Hill USTs, the Navy must demonstrate that its proposed operations at Red Hill satisfy all requirements imposed by applicable laws, rules, and regulations. *See* Order Re Burden of Proof, Produc. Evid. and Persuasion, ¶ 12 (July 14, 2020). The Navy has not and cannot do so. Red Hill has released fuel into the environment in the past, did so just months ago, and will continue to do so in the future. As it exists and is proposed to be operated in the Navy's permit application, Red Hill simply cannot be operated to prevent releases for the operational life of the UST system as required by Hawaii Revised Statutes § 342L-32(b). Nor does the Navy comply with any of the enumerated requirements in HAR § 11-280.1-20(b) for corrosion protection even though corrosion that leads to through-wall holes in the ¼-inch thick steel liner used to contain fuel is well documented. Additionally, the Navy has already violated and will continue to violate the release detection requirements in HAR § 11-280.1-33. The Navy's permit application must be denied, and the Red Hill USTs must be relocated away from Oahu's sole-source groundwater aquifer or upgraded with secondary containment.

A. <u>The Navy Cannot Operate the Red Hill Facility without Future Fuel Releases</u>

The Navy's permit application cannot be lawfully approved because it is clear that operations at Red Hill do not satisfy the mandate of Hawaii Revised Statues Chapter 342L that all USTs and UST systems must be "operated to prevent releases … for the operational life of

the tank or tank system …." H.R.S. § 342L-32(b)(1).[4] The Red Hill USTs and associated infrastructure have a long history of releasing fuel into the environment and this facility will continue to leak if allowed to operate as proposed in the Navy's permit application. To date, at least 73 fuel release incidents involving more than 175,000 gallons of product have occurred at Red Hill. *See* Norfleet Expert Report at 8, app. C; Supp. DeNovio Test. at ¶¶ 7-8: Exhibit B-407. This abysmal record of environmental stewardship and the utter failure of the Navy's UST inspection, repair, and maintenance ("TIRM") practices are so compelling that Dr. David M. Norfleet, the head of an incident investigation group that conducts over 100 failure investigations each year, concluded that more fuel releases from Red Hill are "inevitable." Norfleet Test. at ¶ 10.a; Norfleet Expert Report at iii, 12-61. Dr. Norfleet was right. Less than three months after the conclusion of the contested case hearing itself another fuel release of an unknown quantity of jet fuel, reported as approximately 1,000 gallons, occurred from supply piping in the lower access tunnel underneath the Red Hill tanks during the refilling of Tank 20 on May 6, 2021. *See* Exhibit N-143A. Soil vapor data collected by the Navy indicates that this most recent release also made it into the environment. *See* Supp. DeNovio Test. at ¶ 8; Exhibits B-404 through B-407; *see also* Hr'g Tr. Vol. III, 668:12-18 (Navy witness Mr. Curtis Stanley admitting that "soil vapor monitoring can be a very effective technology for assessing releases at Red Hill."); Reopened Hearing Tr. 7:19-8:11 ("we see elevated or pronounced spikes of soil vapor readings at Tanks 20, 17, 18, and 15 and 16 in particular…").

As disturbing as the May 6, 2021 fuel release to the environment is, fuel releases from the Red Hill USTs themselves remain a dire concern. The most pervasive and ongoing threat to the

[4] Under Hawaii law, a "'[r]elease' includes, but is not limited to, any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an underground storage tank or tank system." H.R.S. § 342L-1.

integrity of these USTs is corrosion which has and can develop into holes in the Red Hill USTs and associated piping that allow fuel to be released into the environment. Moisture trapped between the outside face of the Red Hill USTs' steel liner and concrete shell causes corrosion to form on the backside of the steel liner, and that corrosion progresses inward with time. *See* Norfleet Expert Report at 27, fig. 10. It is well documented that corrosion has and will continue to take place on the outsides or backsides of the USTs' steel liners, areas that the Navy cannot physically access, inspect, maintain, or protect. *See id*. at 17-26, tbl. 2 (summarizing 22 through holes identified in inspections performed on Tanks 2, 5, 6, 15, 16, and 20); *see also* Hr'g Tr. Vol. II, 276:3-10 (Navy witness Mr. Frank Kern testifying that "the answer to your question is yeah, we cannot inspect that [the back side of the Red Hill tanks], correct, visually"). Corrosion-induced holes result in the release of fuel into the environment because the concrete structure does not provide fluid containment, as evidenced by the presence of water on the backside of the USTs' steel liner and the presence of released fuel in the subsurface at Red Hill. *See* Norfleet Expert Report at 3; *see also* Hr'g Tr. Vol. III, 535:2-9 (Navy witness Dr. Gaur Johnson acknowledging that "concrete cracks" and that "fuel could go through the cracks in the concrete" into the subsurface environment).

This ongoing corrosion means that the likelihood of chronic leaks and potentially catastrophic fuel releases from the Red Hill USTs are unacceptably high. Norfleet Expert Report at iii, 59-60; *see also* Exhibit B-15. Given the ever-present threat to tank integrity posed by corrosion-induced failure which cannot be directly observed, eliminated, or reduced as the tanks are currently configured and operated, the only potential way to protect the environment is through a rigorous and thoroughly reliable inspection program that can identify *any and all* areas that are vulnerable to corrosion and effectively repair these areas prior to a through hole

developing in the tank wall. Unfortunately, the overwhelming majority of the Red Hill USTs have not been properly inspected and the evidence in the record clearly shows that even the Navy's current non-destructive examination ("NDE") techniques used to inspect the ¼-inch steel liner of the Red Hill USTs, the only meaningful barrier protecting the environment, are not reliable or accurate. *See* Norfleet Expert Report at 12.

The Navy's claim that its TIRM process is governed by a standard of care and safety that exceeds industry practice is laughable. The American Petroleum Institute ("API") standard 653 for aboveground storage tanks calls for tank inspections to occur on a ten-year interval. *See* Exhibit B-6, at BWS001329. The Navy's own modified API 653 inspection process requires that every Red Hill UST should be inspected within every ten years, unless the corrosion rate is such that an API 653 inspector recommends it can be inspected in 20 years. *See id.* The Navy has failed to meet even its own subpar standard. According to the DOH and the EPA, the Navy's current inspection cycle "is averaging 30 years, with the longest duration being 59 years for Tank 18." Exhibit B-30 at BWS007575. Indeed, Navy witness after Navy witness acknowledged under oath that the Red Hill USTs have not been inspected in a reasonably timely manner nor have many of them even been inspected at all in accordance with modern inspection standards. *See, e.g.*, Hr'g Tr. Vol. I, 189:7-194:15 (Navy witness Mr. John Floyd recognizing that Red Hill Tanks 3, 4, 7, 8, 9, 10, 11, and 12 either have no inspection history or are "overdue for an inspection"); Hr'g Tr. Vol. II, 277:11-280:1 (Navy witness Mr. Frank Kern conceding that the majority of the Red Hill USTs have not undergone the inspection process that the Navy itself claims is the proper standard of care and that more than a quarter of the Red Hill USTs have never undergone any formal API inspection); Hr'g Tr. Vol. III, 618:9-22 (Navy witness CDR Darrel Frame admitting that "we have not met our timeline on some of our tanks" and that at

least eight USTs have not had a major API 653 inspection once every twenty years as required by Navy standards).

Not only are most of the Red Hill USTs overdue for a proper inspection, the Navy's own laboratory testing demonstrates that the Navy's TIRM practices are neither accurate nor reliable. *See* Norfleet Expert Report at 32-37. Destructive testing performed by a Navy-contracted laboratory on ten steel liner samples, commonly referred to as "coupons," removed from Tank 14 in June 2018 indicates that the "vast majority" of the Navy's tank wall inspection measurements do not meet the Navy's own specified accuracy requirements. *See id*. at 33. In addition, four of the ten coupons removed from Tank 14 were thinned by corrosion to the point that they required patching under Navy repair criteria but the NDE prior to coupon removal only identified two of these locations as warranting repair, which corresponds to a 50 percent rate of correctly identifying tank wall areas in need of corrosion repair. *See id*. at 33, tbl. 4, fig. 12; *see also* Hr'g Tr. Vol. II, 418:9-20 (Navy witness Mr. Robert Jamond agreeing that NDE was only accurate in detecting actionable metal loss 50 percent of the time in the ten coupon samples). Collectively, these misidentified areas establish that the Navy's NDE process both over and underestimates the remaining thickness of the Red Hill USTs' steel liner and is unquestionably inaccurate and unreliable. *See* Norfleet Expert Report at 26-27. The odds of the Navy's NDE performing as needed to ensure tank integrity and prevent fuel releases "is the same as flipping a coin." *See id*. at 33.

The inadequacy of the Navy's TIRM process is so apparent that the regulators and the Navy have all agreed to take the extreme step of invoking AOC Section 5.4, which is only to be implemented "[i]f the Parties determine that the results of the previous deliverables in this Section [AOC Section 5 – Corrosion and Metal Fatigue Practices] indicate the need for

evaluation and implementation of potential changes in practices to control corrosion or metal fatigue." BWS Exhibit B-82 at BWS008976. If so, the Navy must take action "for the purpose of developing appropriate modification to the scopes of work and timelines in Section 2 [Tank Inspection, Repair, and Maintenance] and/or Section 3 [Tank Upgrade Alternatives]" and AOC "deliverables *shall* be modified or added … to address any needs for further evaluation, development, or implementation of practices to control corrosion or metal fatigue." *Id.* (emphasis added). As such, Section 5.4 of the AOC is supposed to be a fail-safe mechanism. Its invocation is an acknowledgement that the Navy's TIRM process is not good enough and that the Navy's operations at Red Hill cannot adequately safeguard our critical drinking water resources.

Approval of the Navy's permit application would require a finding that there is no risk or, at a minimum, an extremely low risk for future chronic or catastrophic releases from Red Hill. Such a finding cannot be made as it is directly contradicted by the baseline quantitative risk and vulnerability assessment ("QRVA") report issued by Navy consultant ABS Consulting (Exhibit B-15), which substantiates the chronic and potentially catastrophic risks associated with operating enormous fuel tanks a mere 100 feet above a one of a kind sole-source aquifer. The Navy's QRVA report details a comprehensive quantitative engineering evaluation of the internal event hazards at Red Hill designed to provide a baseline assessment of the level of risk Red Hill poses to nearby groundwater resources. *See* Exhibit B-15 at BWS005019; *see also* Norfleet Expert Report at 50 (the QRVA report "was professionally executed using recognized risk assessment software"). The QRVA report confirms that both the risk of a sudden, large release and an undetected, slow fuel release from Red Hill to the environment are unacceptably high. According to the Navy's own consultant, we can expect:

- Greater than 27% probability of a sudden release of between 1,000 and 30,000 gallons of fuel from Red Hill each year;

- Greater than 34% chance of a sudden release of more than 120,000 gallons from Red Hill in the next 100 years;

- Greater than 5% chance of a sudden release of more than 1 million gallons from Red Hill in the next 100 years; and

- 5,803 gallons per year of chronic, undetected fuel releases from Red Hill.

Exhibit B-15 at BWS005021. The Navy agrees that these levels of risks are unacceptable. Hr'g Tr. Vol. III, Testimony of Darrel Frame, 575-576.

Although the Navy's QRVA report confirms that both the risk of a sudden, large release and an undetected, slow fuel release from Red Hill to the environment are unacceptably high, the overall risk of future releases from Red Hill are actually much higher:

> Several specific deficiencies and limitations likely contribute significantly to ABS' underestimation of risk, including: (1) reliance on incomplete historical release data from [Red Hill]; (2) reliance on an unwarranted assumption that UST leak rates are constant over time, disregarding physical failure mechanisms, like corrosion, that correspond with an increasing rate over time as a true renewal process is not occurring; (3) discounting releases identified by the tell-tale leak detection and collection system without sufficient due diligence; (4) calculation of leak frequency distributions for individual [Red Hill] USTs using Navy leak data from dissimilar (smaller) tanks at distant locations, while excluding leak data from neighboring [Red Hill] USTs; and (5) exclusion from the initial (Phase 1) QVRA the consideration of risks from such external sources such as fire, flood, and earthquake.

Norfleet Expert Report at 50-51. The May 6, 2021 release of approximately 1,000 gallons of jet fuel from supply piping in the lower access tunnel tanks during the refilling of Tank 20 merely serves to underscore the reality of these immense risks to Oahu's sole-source groundwater aquifer.

Fatal to its case, the Navy offers no credible rebuttal to this clear and compelling evidence. *Compare* Norfleet Expert Report at 50 (although underestimating the likely overall

risk of future fuel releases from Red Hill, the Navy's QRVA report "was professionally executed using recognized risk assessment software") *with* Hr'g Tr. Vol. III, 570:9-19, 581:23-582:22 (Navy witness CDR Darrel Frame, despite offering written testimony purporting to address the meaning and the importance of the Navy's QRVA report, conceding that he could not answer and was not qualified to answer certain questions about the Navy's risk assessment). There is simply no credible evidence in the record that reasonably disputes these dire risks to our irreplaceable drinking water resources. Given the long history of fuel releases from Red Hill, the tank integrity threat posed by the corrosion afflicting the Red Hill USTs from the side of the steel liner that the Navy cannot inspect or maintain, the inaccuracy and unreliability of the Navy's TIRM practices, and the results of the Navy's own baseline risk assessment, it is clear that Red Hill cannot be operated, as required, "to prevent releases … for the operational life of the tank or tank system …." H.R.S. § 342L-32(b)(1). Accordingly, the DOH must deny the Navy's permit application and instead order the Navy to relocate the Red Hill USTs away from Oahu's sole-source groundwater aquifer or upgrade them with secondary containment.

B. The Red Hill USTs Do Not Comply with Corrosion Protection Requirements

State law recognizes the immense threat that corrosion can pose to the integrity of steel utilized in USTs. DOH regulations require UST systems with field-constructed tanks like those at Red Hill to be upgraded to comply with the codes of practice in corrosion protection performance standards found at HAR § 11-280.1-20(b), among others, or be closed. HAR § 11-280.1-21(a). HAR § 11-280.1-20(b) enumerates the five criteria by which a UST can comply with the performance standards for corrosion protection: (1) the UST is constructed of fiberglass-reinforced plastic; (2) the UST is constructed of steel and cathodically protected; (3) the UST is constructed of steel and clad or jacketed with a non-corrodible material; (4) the

UST is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life; or (5) the UST construction and corrosion protection are determined by the DOH to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than criteria (1) through (4). *See* HAR § 11-280.1-20(b).

The Navy has not upgraded the Red Hill USTs with ***any*** corrosion protection. Specifically, none of the five allowable corrosion protection alternatives, as stated in the administrative rules, have been met or will be met if the Navy's permit application is approved. *See* Norfleet Expert Report at 62-66. The first two options are to construct the Red Hill USTs with non-corrodible fiberglass-reinforced plastic or to employ cathodic protection; neither of these apply to the USTs at Red Hill as they are concrete tanks with a steel liner that has not been cathodically protected. *See id*. at 63; *see also* Testimony of CDR Blake Whittle ("Whittle Test."), 18:11-13 ("The Red Hill tanks are made from quarter-inch-thick welded steel liners surrounded by reinforced concrete."); Testimony of Robert Jamond ("Jamond Test."), 6:8 ("Cathodic protection is not used to protect the steel liner….") (footnote omitted).[5]

The third option requires that steel USTs be clad or jacketed with a non-corrodible material. This is also not applicable to the Red Hill USTs, as the Red Hill USTs do not satisfy any of the codes of practice for cladding or jacketing listed in HAR § 11-280.1-26(c)[6] and

[5] The Red Hill USTs are more properly considered concrete USTs with steel liners, not steel USTs. *See* Norfleet Expert Report at 3; *see also* Whittle Test., 17:5-6 ("The Navy listed the primary containment of the tanks as steel liner over concrete…."); Exhibits B-190 through B-192 (Tanks 6, 15, and 16 are each described in Navy inspection reports as "an underground concrete tank with a steel liner"). In any event, the concrete shells of the Red Hill USTs "are cracked and/or perforated, and deteriorating" resulting in pathways for water to reach the steel liner through the concrete and leaked fuel to reach the environment. Norfleet Expert Report at 65. There is ample evidence in the record that the concrete provides neither meaningful containment nor adequate corrosion protection.

[6] HAR § 11-280.1-26(c) states that the following codes of practice "may be used to comply" with HAR § 11-280.l-20(b)(3): (1) Underwriters Laboratories Standard 1746, "External Corrosion Protection Systems for Steel Underground Storage Tanks"; (2) Steel Tank Institute ACT-100® Specification F894, "Specification for External

"cannot be considered clad or jacketed as such terms are defined or understood in industry practice." *See* Norfleet Expert Report at 64; *see also* Hr'g Tr. Vol. I, 136:15-137:2 (Navy witness Ms. Danae Smith admitting that she could not identify any of the enumerated codes of practice listed in HAR § 11-280.1-26(c) that the Navy uses to comply with mandated corrosion protection requirements). The Red Hill USTs' steel liners are not clad or jacketed with concrete;[7] rather, they merely had concrete cast against the unprotected steel surface decades ago using antiquated tank construction practices. *See id*. at 3-4; Exhibit B-174, at BWS024974-76. In fact, the outside surfaces of the steel liners, in many locations, are not in intimate contact with concrete, and moisture between the steel and the concrete is causing the USTs to corrode. *See* Norfleet Expert Report at 8, 65; Exhibits B-28 and B-157. The condition of the concrete is such that it "does not serve as a barrier to water ingress" and thus does not provide a barrier to corrosion as would a cladding or jacketing. *See* Norfleet Expert Report at 63; *see also* Jamond Test. at 17:14-18:3 (acknowledging "some corrosion had occurred" at Tank 14 and "there is the potential for corrosion to occur or continue").

The fourth and fifth options are for a "corrosion expert" to determine that the site is not corrosive enough to cause the Red Hill USTs to have a release due to corrosion during their operating life or for the DOH to independently determine that the existing corrosion protection is no less protective than level of protection provided by the other options. Neither of these determinations have been made, nor would either be justifiable considering the documented

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Corrosion Protection of FRP Composite Steel Underground Storage Tanks"; Steel Tank Institute ACT-100-U® Specification F961, "Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks"; or Steel Tank Institute Specification F922, "Steel Tank Institute Specification for Perma tank®". These are the same codes of practice identified in the federal regulations. *See* Norfleet Expert Report at 64; 40 CFR § 280.20.

[7] In a preliminary response to the Navy's initial permit application, DOH staff indicated that the Red Hill USTs could be considered steel tanks clad or jacketed with concrete. *See* Exhibit B-70 at BWS008572. However, such a determination would not be in accordance with applicable regulatory requirements or consistent with the existing condition of the Red Hill USTs.

through-wall corrosion at the Red Hill USTs. Dr. David M. Norfleet, an expert in corrosion and degradation/failure mechanisms associated with oil and gas assets, testified unequivocally that "no expert could credibly determine that the [Red Hill] site is not corrosive enough to cause a corrosion-induced release during the life of the USTs." Norfleet Expert Report at 65. He also testified that the Red Hill USTs "are not designed to prevent releases in a manner that is equally protective of human health and the environment as fiberglass construction, cathodic protection, or proper cladding or jacketing." *Id*. Simply put, the Navy has not and cannot demonstrate that the Red Hill USTs comply with applicable corrosion protection requirements or that these tanks are adequately protected from corrosion and, as a result, the Navy's permit application must be denied.

C. The Navy Has Not and Cannot Meet Applicable Release Detection Requirements

The Navy has already violated and will continue to violate the DOH's UST regulations specifying the release detection requirements all UST operators must satisfy to comply with law. Specifically, DOH rules require owners and operators of UST systems to ensure that repairs will prevent releases due to structural failure or corrosion for as long as the UST system is used to store regulated substances. *See* HAR § 11-280.1-33(a). Among other things, prior to the return to use of a repaired UST system, all repaired USTs must pass a tank tightness test in accordance with HAR § 11-280.1-43(3). *See* HAR § 11-280.1-33(a)(4). The Navy does not deny this.

Q. WHAT SECTIONS OF HAR § 11-280.1 ADDRESS REPAIRS TO UST SYSTEMS?

A. HAR § 11-280.1-33 requires UST owners and operators to ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The following requirements apply to repairs undertaken at Red Hill:

…

> (3) Prior to the return to use of a repaired UST system, any repaired USTs must pass a tank tightness test in accordance with section 11-280.1-43(3);

See Smith Test. at 10:9-11:2. That release detection method for repaired USTs unequivocally specifies a 0.1 gallon per hour (gph) rate tank tightness test performance criteria:

> Tank tightness testing. Tank tightness testing (or another test of equivalent performance) must be capable of detecting a **0.1 gallon per hour leak rate** from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

HAR § 11-280.1-43(3) (emphasis added). The Navy violated this provision when it returned Tank 5 to service in 2020 after it was repaired, and it will continue to violate this legal requirement every time it repairs one of its leaky USTs. *See* Hr'g Tr. Vol. I, 140:2-12 (Navy witness Ms. Danae Smith testifying that the Navy only applied the 0.5 gph standard used for annual tank tightness testing when it tested Tank 5 prior to returning it to service after repair and that the Navy has not asked its release detection vendor to meet the 0.1 gph standard). The DOH cannot approve the Navy's permit application where, as here, the Navy cannot even meet basic, generally applicable release detection requirements for repaired USTs.

Nor has the Navy presented sufficient information to conclude that it can detect fuel releases in the normal course of operations. DOH regulations require UST systems with field-constructed tanks like those at Red Hill to be regularly monitored for releases in a manner that meets specified requirements. *See* HAR § 11-280.1-41. HAR § 11-280.1-43(10) allows an annual tank tightness test that can detect a 0.5 gph leak rate as a release detection method for nonrepaired field-constructed USTs. *See* HAR § 11-280.1-43(10)(A). The Navy claims that it performs a semi-annual tank tightness test on the in service Red Hill USTs that is third-party certified to detect a 0.5 gph leak rate or better, but the Navy has not itself validated this

representation nor has it provided the actual data and analyses necessary to fully evaluate such claims. *See* Smith Test. at 9:13-10:2; Testimony of Christopher D. Caputi ("Caputi Test."), 2:7-8; Hr'g Tr. Vol. II, 230:7-12 (Navy witness Mr. Christopher Caputi testifying that the Navy relies upon a third party vendor to both assess the accuracy of and calibrate the equipment used to perform tank tightness testing on the Red Hill USTs). The Navy's release detection claims cannot be accepted without support. DOH's decision as to whether or not to issue the Navy a permit to operate the Red Hill USTs must be based solely on the evidence presented in this contested case. *See* H.R.S. § 91-9(g) ("No matters outside the record shall be considered by the agency in making its decision except as provided herein."); *see also* HAR § 11-1-42(c) (final decision maker must "consider the whole hearing record or those parts the parties designate").[8] Accordingly, the Navy has not met its burden to prove it can satisfy applicable release detection requirements.

D. The Navy Has Failed to Demonstrate that Operations at Red Hill Are Protective of Human Health and the Environment

Faced with the inevitability of future fuel releases from the Red Hill USTs, the Navy is left to contend that operations at Red Hill are nevertheless protective of human health and the environment because the contamination of the subsurface and Oahu's irreplaceable groundwater aquifer might remain localized. *See* Testimony of Curtis Stanley, 8:1-11:8, Facility Environmental Report for Contested Case Hearing No. 19-UST-EA-01 ("Stanley Expert Report"). Hawaii law requires more. Public trust principles compel the DOH to protect not just drinking water, but the irreplaceable groundwater aquifer that nourishes Oahu's drinking water

[8] The BWS recognizes that the cover letter to the Navy's permit application states that the information redacted therein has been provided in full to the DOH. Exhibit B-251. That the Navy may have provided a complete, unredacted version of its permit application to the DOH is irrelevant. This information is not available to the parties or the Hearings Officer and is not in the administrative record. Thus, it cannot form the basis of a decision in this proceeding.

supply. *Kauai Springs*, 133 Haw. at 172 ("[T]he public trust doctrine applies to all water resources without exception or distinction.") (alteration and emphasis in original). The Navy has not and cannot meet this burden and, therefore, its permit application must be denied.

To demonstrate that the Navy's operations at Red Hill are protective of human health and the environment, there must be substantial data and robust technical analysis to prove, at a minimum, that Oahu's federally designated sole-source aquifer will not be contaminated. There is not. To the contrary, Navy witness Mr. Curtis Stanley's opinions related to whether or not the Navy's operations at Red Hill are protective of human health and the environment fail to adequately account for the considerable uncertainties arising from the lack of data collected by the Navy's sparse monitoring well network and the resulting challenges in characterizing the groundwater flow system and the nature and the extent of groundwater contamination at and around Red Hill. *See* DeNovio Test. at ¶ 9.c; DeNovio Expert Report at i, 14-18. These uncertainties are compounded by the fact that the subsurface conditions in the vicinity of Red Hill, where fuel migration occurs in a highly heterogeneous basalt containing preferential flows, is extremely complex and insufficiently characterized. *See* DeNovio Test. at ¶ 9.a; DeNovio Expert Report at i-ii, 1-14, 19. This level of uncertainty is fatal to Mr. Stanley's claim of protectiveness as it means that the Navy cannot adequately evaluate the possibility that fuel releases from Red Hill could migrate to and impact critical drinking water receptors like the BWS' Halawa Shaft.

It is undisputed, however, that the Red Hill USTs have leaked in the past and, as discussed in greater detail above, the likelihood of ongoing chronic leaks and potentially catastrophic future fuel releases from Red Hill are essentially certain. The Navy also acknowledges that fuel releases have impacted the sole-source groundwater aquifer. *See, e.g.*,

Hr'g Tr. Vol. IV, 876:22-877:4 (Navy witness Mr. Curtis Stanley testifying that Navy operations have "impacted the aquifer immediately beneath Red Hill, but that impact is confined to the area relatively beneath Red Hill …."); Stanley Expert Report at 15 ("[I]mpacts to groundwater appear to be limited to the immediate vicinity of the tank farm …."); Exhibit B-10 at BWS003492 ("Previous environmental Site Investigations (SIs) at the Facility showed that past inadvertent releases have contaminated the fractured basalt, basal groundwater, and soil vapor beneath the Facility with petroleum hydrocarbons."); Exhibit B-11 at BWS003856 ("Groundwater contamination exists around the underground storage tanks (USTs) at [Red Hill] because of irregular maintenance and insufficient inspection over the life of the fuel tanks."); *see also* Supplemental Testimony of Curtis Stanley, 14:1-4 ("The Navy has never pretended there aren't impacts to the groundwater below the tanks. As can be seen in the FER, the Navy never stated that the holding capacity 'prevents' migration of fuel; rather, the holding capacity undoubtably [*sic*] 'helps to impede' downward migration…."). Mr. Stanley's opinions that no petroleum "product" has been measured in any drinking water or monitoring well and no fuel constituents have been detected above regulatory screening levels outside of the "immediate vicinity" of Red Hill (*see* Stanley Expert Report at i) are misleading and legally irrelevant. *See* DeNovio Test. at ¶ 9.e; DeNovio Expert Report at 21, 31-35; *see also* Exhibit B-339 at BWS034975 ("[T]here is an indication that LNAPL [i.e., light nonaqueous-phase liquid or petroleum fuel product] is at or near the water table upgradient from RHMW02.").

If DOH were to accept Mr. Stanley's arguments as sufficient, it would need to conclude that the State can only act to protect groundwater once it is shown that this precious resource is already grossly contaminated, and that the DOH cannot take action to prevent the contamination. Mr. Stanley's argument is contrary to the Hawaii Constitution, State statutes and regulations, and

defies logic. This proceeding is not about whether the drinking water is *currently* impacted or the proper cleanup standard to which the Navy must remediate the hundreds of thousands of gallons of fuel it has already released into the environment. It is about whether the Navy can operate Red Hill in accordance with Hawaii law and without putting the State's water, including groundwater, resources at risk. Nothing in Mr. Stanley's testimony or expert report proves that the Navy can do so.

The Navy's remaining purported justifications for Red Hill being protective of human health and the environment are based on unwarranted assumptions, improper conclusions drawn from a limited dataset, and/or incomplete and unapproved Navy work product and should be rejected. Specifically, Mr. Stanley's presumed natural attenuation rates are overstated, highly uncertain and cannot be reconciled with the data collected and analyses performed to date. *See* DeNovio Test. at ¶ 9.d; DeNovio Expert Report at i, 37-43. Mr. Stanley also improperly credits the Navy for future improvements at Red Hill that have not been approved by regulators or committed to by the Navy. *See* DeNovio Expert Report at i, 43-44. The DOH should not accept these unproven and speculative claims as indicative of protectiveness. In October 2020, the DOH rejected similar contentions, concluding that the Navy had not demonstrated that proposed operations at Red Hill are "the most protective of the groundwater and drinking water resources and other options are either less protective or impractical; and that the proposed alternative adequately mitigates release risk." Exhibit B-28 at BWS007367. It should do so again. The factual and technical record is clear that the Red Hill USTs pose a substantial threat to Oahu's irreplaceable sole-source groundwater aquifer. *See* DeNovio Test. at ¶ 10 ("Facility operation as described in the Navy's permit application is not protective of human health and the environment.").

IV. NAVY WITNESSES UNDERMINE THE NAVY'S CASE AND LACK CREDIBILITY

The Navy has not and cannot accurately marshal the facts or present a consistent, credible argument when it comes to whether or not the Navy can operate Red Hill in compliance with Hawaii law. The Navy offered the testimony of ten witnesses during the contested case hearing. Most witnesses made admissions damaging to the Navy's position in this contested case and/or presented testimony that was not credible and should be afforded no or negligible evidentiary weight. Most egregiously:

- CDR Blake Whittle. Commander Whittle testified that the lower access tunnel could contain an immense volume of fuel released including a catastrophic release of one million gallons of fuel. *See* Hr'g Tr. Vol. I, 72:2-24. However, the Navy was unable to entirely contain in the lower access tunnel or prevent from entering the subsurface environment a much smaller fuel release of reportedly approximately 1,000 gallons that occurred on May 6, 2021. *See* Supp. DeNovio Test. at ¶ 8; *see also* Hr'g Tr. Vol. I, 200:5-18 (Navy witness Mr. John Floyd testifying that he was not aware of any lower access tunnel tightness test that has been performed to conclude that the tunnel will hold released fuel); Reopened Hearing Tr. 7:19-8:11 ("the fuel from the tunnel was not contained in the tunnel, and the soil vapor probes indicate that fuel was released to the environment."), 23:11-23 ("we can tell that the soil vapor monitoring probes over quite a long time – several weeks – are indicating the presence and persistence of concentrations that indicate fuel or fuel constituents [in the environment]."). Clearly the recent release confirms that this tunnel is not leak tight. Commander Whittle's testimony concerning the Navy's ability to prevent releases into the environment from the lower access tunnel can be afforded no probative value.

- Ms. Danae Smith. Ms. Smith initially incorrectly claimed in her written testimony that "HAR § 11-280.1-20(b) and (c) state that each tank and any piping 'that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and installed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory.'" Smith Test. at 6:19-7:6. Ms. Smith was wrong and corrected her testimony at the hearing. *See* Hr'g Tr. Vol. I, 126:12-128:7. While HAR § 11-280.1-20(c), which applies to UST system piping, does include the language initially referenced by Ms. Smith, HAR § 11-280.1-20(b), which applies to the USTs themselves, does not. That is not the only error Ms. Smith made with respect to the regulations pertaining to the Navy's operations at Red Hill. Ms. Smith also testified that the Navy meets UST repair requirements. *See* Smith Test. at 10:9-11:16 ("Repaired components are tested

and inspected in accordance with the above rule [i.e., HAR § 11-280.1-33].”). As discussed above, HAR § 11-280.1-33 requires that all repaired USTs must pass a tank tightness test in accordance with the 0.1 gph tank tightness test performance standard specified in HAR § 11-280.1-43(3). Ms. Smith admitted, however, that repaired Red Hill USTs do not undergo nor satisfy this express requirement for a 0.1 gph tank tightness test. *See* Hr’g Tr. Vol. I, 137:23-140:12. Ms. Smith’s testimony that the Navy can meet all applicable release detection requirements is unsupported and her testimony concerning the Navy’s ability to meet the requirements of Hawaii law are not credible.

- Mr. John Floyd. Although Mr. Floyd is charged with overseeing the maintenance of Red Hill, he testified that he had no knowledge about the status of the Navy’s TIRM process and the modifications required under AOC Section 5.4 to correct well-documented deficiencies in the Navy’s current inspection practices. *See* Hr’g Tr. Vol. I, 172:5-173:10. While Mr. Floyd demonstrated an understanding of how the Navy implemented its TIRM procedures, his testimony regarding the adequacy of the Navy’s TIRM process should be afforded no weight.

- Mr. Frank Kern. Mr. Kern indicated that he did not believe tank-within-a-tank secondary containment was a feasible upgrade solution for the USTs at Red Hill, testifying under oath that “if it was a feasible thing to do, the Navy would have done it.” Hr’g Tr. Vol. II, 237:13-14. Mr. Kern’s testimony is refuted by the Navy’s own December 2017 Tank Upgrade Alternatives (TUA) report. *See* Exhibit B-174 at BWS025105 (recognizing that tank-within-a-tank secondary containment (TUA Option 3A) “can be constructed in the field at Red Hill using practicable construction means and methods.”). Mr. Kern’s testimony regarding the feasibility of installing secondary containment at Red Hill is not credible.

- CDR Darrel Frame. The only witness that the Navy presented to address its QRVA report, Commander Frame, acknowledged that he did not have any formal education in performing or evaluating risk and vulnerability assessments, did not have any formal training in performing or evaluating risk and vulnerability assessments, and did not have any certifications related to risk and vulnerability assessments. *See* Hr’g Tr. Vol. III, 570:9-19. According to Commander Frame himself, “that’s why we hired a consultant.” *Id*. Under cross-examination, Commander Frame could not answer and conceded that he was not qualified to answer certain questions about the Navy’s risk assessment. *See id*. at 581:23-582:22. Commander Frame’s testimony concerning the Navy’s QRVA can be afforded no probative value.

- Mr. Curtis Stanley. Mr. Stanley’s lack of credibility has been briefed at length in this proceeding. *See* Order Denying Mot. To Strike the Test. of Curtis Stanley and/or for a Negative Inference (Apr. 28, 2021) (“In this matter, the objections and assertions of the BWS with regard to the testimony of Curtis Stanley and the supporting files and records produced relating thereto will be considered by the Hearing Officer in determining the appropriate weight to be afforded to such

> testimony.").[9] The Navy has argued, and Mr. Stanley has submitted a declaration attesting, that raw data and modeling files that serve as the basis for his testimony and reports were not "re-investigated, re-examined, or validated" by Mr. Stanley in the course of preparing his expert report. Declaration of Ella Foley Gannon in support of Pet'r BWS' Motion to Strike the Testimony of Curtis Stanley, Exhibit B (referencing a January 8, 2021 email from Navy counsel Marnie Riddle); *id.* at Ex. C ("Declaration of Curtis Stanley"). Based on this glaring admission, it is clear that Mr. Stanley did not perform an independent assessment or evaluation of critical data and information to form his opinions and conclusions. Rather, he merely reiterated and summarized findings from other Navy sources. Mr. Stanley even stated in his January 8, 2021 declaration that his expert report "is not intended to independently replicate, validate, or critically analyze the extensive environmental investigations and studies that have already been performed by the Navy." *Id.* at Ex. C, ¶ 2. Mr. Stanley's testimony and report, then, should not be given any weight because he did not "critically analyze" any of the issues in this matter. The factual and technical bases for Mr. Stanley's opinions have been so undermined by the Navy's and Mr. Stanley's own admissions that the only reasonable conclusion is to afford them no meaningful evidentiary weight.

Rather than support the Navy's position, its witnesses undermine it. The Hearings Officer should critically evaluate the credibility of the Navy witnesses based on the testimony and documentary evidence presented in this proceeding. This means, among other things, that the Hearings Officer must consider the bases for the Navy witnesses' testimony and disregard it to the extent that the testimony relies on unproven or erroneous assumptions, particularly where the testimony is contradicted by other Navy documents. The Hearings Officer must also decide how much of the Navy witnesses' testimony to believe, and how much weight it should be given. Based on the totality of the evidence presented during this contested case, the only reasonable conclusion is to render much of the Navy witness testimony no probative value.

[9] *See also* Pet'r Honolulu Board of Water Supply's Mot. to Strike the Test. of Curtis Stanley and/or for a Negative Inference Addressing the Navy's Refusal to Comply with the Dec. 30, 2020 Order to Prod. Information (Mar. 16, 2021); Pet'r Honolulu Board of Water Supply's Reply in Supp. of Mot. to Strike the Test. of Curtis Stanley and/or for a Negative Inference Addressing the Navy's Refusal to Comply with the Dec. 30, 2020 Order to Prod. Information (Mar. 30, 2021); Pet'r Honolulu Board of Water Supply's Sur-Reply in Supp. of Mot. to Strike the Test. of Curtis Stanley and/or for a Negative Inference Addressing the Navy's Refusal to Comply with the Dec. 30, 2020 Order to Prod. Information (Mar. 30, 2021).

V. THE DOH CAN AND SHOULD REQUIRE THE NAVY TO RELOCATE THE RED HILL USTS OR UPGRADE THEM WITH SECONDARY CONTAINMENT

Relocating the Red Hill USTs or upgrading them with tank-within-a-tank secondary containment is long overdue. While a permit to operate cannot lawfully be issued for the Red Hill USTs as they are configured and proposed to be operated in the Navy's application, Hawaii law empowers the DOH with the authority to impose conditions on a permit where "reasonably necessary to ensure compliance with this chapter and any other relevant state requirement, including conditions relating to equipment, work practice, or operation." HAR § 280.1-328. The only way to ensure the fuel storage operations at Red Hill comply with Hawaii law is to require, as a condition to granting a permit to operate, that the Navy relocate the Red Hill USTs or upgrade them with secondary containment.

The Navy's resistance to implementing these more protective measures appears to hinge on its position that relocation and tank-within-a-tank secondary containment are not feasible. But the Navy provides nothing more than conclusory statements in support of its position. *See, e.g.*, Whittle Test. at 12:14-15 ("[T]he Red Hill Facility is a strategically important national defense asset due to its unique location and capacity."); Supplemental Testimony of Frank Kern, 1:18 ("Navy has not acknowledged 'tank-within-a-tank' can be built at Red Hill."). These technical and constructability concerns are contradicted by the fact that the Navy's December 2017 Tank Upgrade Alternatives (TUA) report recognizes that tank-within-a-tank secondary containment (TUA Option 3A) "can be constructed in the field at Red Hill using practicable construction means and methods." Exhibit B-174 at BWS025105; *see also* Hr'g Tr. Vol. III, 271:22-272:25 (Navy witness Mr. Frank Kern admitting that the Navy's 2017 TUA report concluded that tank-within-a-tank secondary containment can be constructed in the field at Red Hill using practicable construction means and methods, but that the Navy has neither

implemented nor committed to implementing that solution). The Navy's desire to continue with status quo operations that place Oahu's critical drinking water resources at risk cannot be allowed to override its prior feasibility analysis on secondary containment. Similarly, relocation is a viable option. In fact, the Navy has recently decided to decommission other 1940s-era USTs and relocate the fuel to new aboveground storage tanks at facilities in Point Loma, California and Manchester, Washington. *See* Responsive Testimony of Danae Smith, 1:1-7, 2:1-6. These more protective options are feasible and, in the event the DOH issues a permit to the Navy authorizing future fuel storage operations, must be included as a permit condition.

VI. CONCLUSION

The DOH's public trust responsibility to safeguard all of Hawaii's water resources, including groundwater, prevents it from granting the Navy a UST operating permit for Red Hill. The Navy cannot prove that the Red Hill facility will not release more fuel that will continue to impact Oahu's sole-source groundwater aquifer and could not even make it through this contested case proceeding without another release to the environment. It has not implemented adequate corrosion protection for the Red Hill USTs. It has violated and will continue to violate applicable release detection requirements when returning repaired USTs to service. It has failed to meet its burden to prove future operations will be protective of human health and the environment. The Navy's operations at Red Hill do not comply with Hawaii law. Accordingly, the Navy's permit application must be denied, and the Red Hill USTs must be relocated away from Oahu's sole-source groundwater aquifer or upgraded with secondary containment.

PETITIONER HONOLULU BOARD OF WATER SUPPLY'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDED DECISION

I. FINDINGS OF FACT

A. Procedural History

1. Effective July 15, 2018, the Hawaii Department of Health (DOH) adopted Hawaii Administrative Rules (HAR) Chapter 11-280.1, requiring large field-constructed underground storage tanks (USTs) like those at the Red Hill Bulk Fuel Storage Facility (Red Hill) be subject to permitting requirements by July 15, 2019. HAR §§ 280.1-10(a)(1)(A), 280.1-323(a).[10]

2. By letter received by the DOH on May 23, 2019, as corrected June 12, 2019, the United States Department of the Navy (Navy) submitted its operative application seeking a permit to operate the Red Hill facility, including its USTs, as required under Hawaii Revised Statutes (H.R.S.) Chapter 342L and HAR Chapter 11-280.1. *See* Exhibits B-77, B-246 through 252, and B-301 through 304.

3. On June 24, 2019, the Honolulu Board of Water Supply (BWS) submitted a letter to the DOH objecting to the Navy's application. Exhibit B-22.

4. By letter and complaint dated October 29, 2019, the BWS requested a contested case hearing concerning the Navy's application. Updated Testimony of Erwin Kawata ("Kawata Test."), ¶ 37; Exhibit B-23.

5. As the applicant for the permit that is challenged in this proceeding, the Navy has the burden of proof, the burden to produce evidence, and the burden of persuasion to demonstrate that it can maintain and operate the Red Hill facility consistent with the

[10] H.R.S. § 342L-32(b)(3) required existing USTs to be replaced or upgraded by December 22, 1998, but field-constructed USTs were largely exempted from DOH's UST rules until July 15, 2018.

requirements of State law. *See* Order Re Burden of Proof, Produc. Evid. and Persuasion, ¶ 12 (July 14, 2020).

6. The initial contested case hearing took place from February 1 through 5, 2021, with closing arguments being offered on February 8, 2021.

7. All the parties' written testimony and exhibits submitted in this proceeding were admitted into the record and have been considered as part of this proceeding. The parties and the Hearings Officer had the opportunity to cross-examine each witness that presented testimony and the oral testimony presented at the hearings has also been evaluated and considered.

8. Following the close of the initial hearing, there was a release of fuel into the environment from the Red Hill facility (*see* Updated Supplemental Written Testimony of Nicole M. DeNovio ("Supp. DeNovio Test."), ¶¶ 2-3, 8) and at the request of the BWS, the proceeding was reopened to allow for additional information and testimony related to that release.

9. A hearing was conducted on July 7, 2021 to allow for cross-examination of the sole witness who presented testimony and expert opinion related to the May 2021 release, Dr. Nicole M. DeNovio on behalf of the BWS.

B. The Parties

10. The Navy is the owner and operator of the Red Hill facility. Exhibit B-1 at BWS000011. The Navy is seeking a permit to operate the Red Hill facility under State law, including H.R.S. Chapter 342L and HAR Chapter 11-280.1. *See* Exhibits B-77, B-246 through 252, and B-301 through 304.

11. The BWS is the largest municipal drinking water utility in the State of Hawaii and is responsible for managing Oahu's municipal water resources and distribution system. Kawata Test. at ¶¶ 6-7. The BWS' mission is to provide safe, dependable and affordable water now and into the future. Kawata Test. at ¶ 6. The BWS has a public trust responsibility to protect the water resources that it manages and to preserve the rights of present and future generations in the waters of the State. Kawata Test. at ¶ 8. As a direct result of the Navy's past fuel releases into the environment, the BWS has devoted considerable time and resources to addressing damage to Oahu's sole source groundwater aquifer. Kawata Test. at ¶ 22.

12. The Sierra Club is a nonprofit corporation with more than 2,700 dues-paying members who live on Oahu and depend on the clean drinking water from the sole source aquifer that underlies the Red Hill facility. The Sierra Club's mission includes the protection of natural resources, including the purity of groundwater. Declaration of Jodi Malinoski, ¶ 7.

13. The Environmental Health Administration is a division of the Department of Health that is tasked with reviewing, analyzing, and recommending how applications for USTs should be resolved.

C. History and Description of the Red Hill Facility

14. The Red Hill facility is located on the island of Oahu, Hawaii, approximately 2.5 miles northeast of Pearl Harbor. It occupies approximately 144 acres of land along the western edge of the Koolau Range situated on a topographic ridge that divides the Hawala Valley and the Moanalua Valley. It consists of twenty field-constructed USTs as well as other infrastructure. Kawata Test. at ¶¶ 10, 12; Exhibit B-2.

15. In addition to the twenty USTs, the Red Hill facility includes seven miles of tunnels with 29 miles of pipelines, ventilation systems with air intakes and exhaust portals, a pumphouse, control room, surge tanks, slop oil and oil recovery facilities, and a pier that can fuel ships. Testimony of Blake Whittle ("Whittle Test.") at NAVY0027276; Testimony of John Floyd ("Floyd Test.") at NAVY0026808.

16. The twenty USTs were constructed during the early 1940s by mining into the ridge to create cavities for concrete tank lined with ¼ inch steel plates welded together. Gunite was used to line the rock cavities. The steel lining was built against a steel rebar framework and then concrete was pumped over the steel framework. The reinforced concrete is estimated to vary in thickness from 2 to 4 feet. Gunite lines the rock cavities. After the concrete set, pressurized grout was pumped between the concrete and the gunite layer. Whittle Test. at NAVY0027280. The concrete, the gunite ,and the surrounding bedrock support the steel liner. *See id.*

17. The bottoms of the USTs are located approximately 100 feet above a groundwater aquifer used as a drinking source by the BWS and the Navy. Kawata Test. at ¶ 15; Exhibit B-1.

18. There is no corrosion protection on the outside surface of the steel liner of the Red Hill tanks, as it was not and cannot be painted, coated, or cathodically protected. *See* Updated Written Testimony of David M. Norfleet ("Norfleet Test."), at ¶ 10.b; Expert Report: Evaluation of Underground Storage Tanks at the Red Hill Bulk Fuel Storage Facility ("Norfleet Expert Report"), at iii-iv.

19. The outside of the tanks, the concrete shell, and the surrounding gunite cannot be accessed and have not been repaired, maintained, or upgraded since the original

construction nearly 80 years ago. *See, e.g.*, Hr'g Tr. Vol. I, 189:7-194:15 (Navy witness Mr. John Floyd recognizing that Red Hill Tanks 3, 4, 7, 8, 9, 10, 11, and 12 either have no inspection history or are "overdue for an inspection"); *see also* Hr'g Tr. Vol. II, 276:3-10 (Navy witness Mr. Frank Kern testifying that "the answer to your question is yeah, we cannot inspect that [the back side of the Red Hill tanks], correct, visually").

20. Each tank is approximately 250 feet tall, 100 feet in diameter, and provides a fuel storage capacity of up to 12.5 million gallons of jet or marine. Whittle Test. at NAVY0027272; Kawata Test. at ¶ 12.

21. The Navy stores marine diesel (F-76) and two types of jet fuel, JP-5 and F-24, at Red Hill. Testimony of Danae Smith ("Smith Test.") at NAVY0027318.

22. Two of the tanks have been removed from service (Tanks 1 and 19), but not officially closed. Kawata Test. at ¶ 13; Exhibit B-1. Another two to three tanks are generally empty as part of the Navy's ongoing clean, inspect, and repair program. The Navy generally stores fuel in 14 or 15 tanks at Red Hill, with a total capacity of over 187 million gallons of fuel. Norfleet Expert Report at 3.

23. The tanks are connected to three pipelines that run for approximately 2.5 miles through an underground access tunnel to the underground pumphouse at Pearl Harbor. The fuel can be moved from the Red Hill tanks to Pearl Harbor via gravity. A pumping station controls tank filling and dispenses fuel to ships and Hickman Airfield. Whittle Test. at NAVY0027272.

D. Strategic Importance of the Facility

24. The Navy stores at Red Hill approximately 27 percent of all the Navy fuel in the Pacific, 16 percent of all the Navy fuel worldwide, and 5 percent of all Department of

Defense fuel. Whittle Test. at NAVY0027265. It provides fuel to support the Navy, the U.S. Air Force, the U.S. Marine Corps, U.S. Army, Hawaiian National Guard, and the U.S. Coast Guard. Testimony of Donald Panthen ("Panthen Test.") at NAVY0026879.

25. Given that the Red Hill facility provides the single largest fuel reserve of the Department of Defense and is strategically located to provide fuel for key military and safety operations, it is considered a critical resource. The fuel helps ensure that the U.S. military can respond to emergencies in the Pacific whether they be the result of hostile acts or natural disasters. Whittle Test. at NAVY0027273.

26. The location of the facility on top of Red Hill allows for fuel to be supplied through gravity fed pipelines, allowing it to continue to provide fuel even in the face of power outages. Panthen Test. at NAVY0026880. The entire facility can operate without external power. Whittle Test. at NAVY0027272.

27. Red Hill is a strategic fuel facility required by U.S. Indo-Pacific Command to store Petroleum War Reserve Stocks. Panthen Test. at NAVY0026879.

E. Environmental Setting

28. The Red Hill facility sits directly above Oahu's federally designated sole-source groundwater aquifer, the Southern Oahu Basal Aquifer. In 1987, the U.S. Environmental Protection Agency determined that this aquifer is the "principal source of drinking water" for the island and that "[i]f contaminated, would create a significant hazard to public health." Exhibit B-5.

29. The Southern Oahu Basal Aquifer is irreplaceable. The aquifer is fresh, with less than 250 milligrams per liter of chloride. It is highly vulnerable to contamination. Kawata Test. at ¶ 16; Exhibit B-4. Should the sole source aquifer become contaminated, there

would be a significant impact on the available drinking water available for the citizens of and visitors to Oahu. *See* Written Reply Testimony of Nicole M. DeNovio ("DeNovio Reply Test."), at ¶ 4; Report: Soul Source Aquifer Reply Testimony ("DeNovio Reply Expert Report"), at 4, fig. 3.

30. The BWS supplies drinking water to residents from Moanalua to Hawaii Kai. Seventy-seven percent of the total island-wide water supply comes from the Southern Oahu Basal Aquifer. This is an area that could be impacted by releases from the Red Hill facility.

31. Currently, fuel releases from the Red Hill facility have not caused any measurable impacts to the drinking water supplied by the BWS. Hr'g Tr. Vol. V, Testimony of Erwin Kawata, 982:24-983:25. However, the groundwater under the Red Hill facility has been impacted by Navy operations. *Id.* at 985:11-19. Given that the drinking water supply and the groundwater under the Red Hill facility come from the same aquifer (DeNovio Reply Expert Report, at 3), the drinking water supply could be impacted in the future.

32. The environment that underlies Red Hill is a highly complex and sensitive environment. *See* Updated Written Testimony of Nicole M. DeNovio ("DeNovio Test."), at ¶ 9.a; Report: Evaluation of Hydrology, Groundwater Flow and Contaminant Fate and Transport ("DeNovio Expert Report"), at 2-13. While the Navy has completed some studies of the subsurface environment, the evidence in the record is not sufficient to determine a substantiated understanding of the likely transport of contaminants that are released. DeNovio Expert Report, at 14 (stating that limitations in Red Hill's monitoring networks result in conclusions about the safety and operations at Red Hill as "premature and speculative.").

33. The subsurface environment includes various geological formations which are intermixed and form complex pathways for fluids and vapors, including released fuel and

fuel constituents, to move through the subsurface. DeNovio Expert Report, at ii ("The complex subsurface, characterized by a complicated network of high-speed pathways that can distribute the contaminants, does not prevent the fuel constituents from reaching the Sole Source Aquifer."), 7 ("These lavas, clinker zones, and lava tubes are found intermixed, forming complex pathways for fluids to move through the subsurface."), 9 ("Fractured, volcanic rocks have unique characteristics in that water and contaminants (liquid and vapor) travel in discrete pathways that may be highly spatially variable, fragmented, and discontinuous, and directionally dependent."). This means that: (1) it is difficult to determine where releases have and will travel; and (2) that there are pathways through which it can reach the sole source aquifer. Accordingly, based on the evidence in the record, it is assumed that released fuel presents a risk to the groundwater underlying the facility and the sole source aquifer generally. *Id.* at 21 ("The fact that the released fuel is present in the environment and can reach the Sole Source Aquifer is apparent from an examination of rock cores removed from under the Tank Farm, evaluation of vapor sampling results, and analysis of groundwater trend data.").

F. Releases from the Facility to the Environment

34. There have been episodic releases from the facility over the past 80 years. Hr'g Tr. Vol. I, Testimony of Danae Smith, at 131:1-11; Norfleet Expert Report, at 8-10; Exhibits B-12; B-10; B-15; B-193; B-196; B-198; B-232; B-276; B-296; B-306; B-307. Releases started occurring as early as the 1940s and have continued to occur since 2014 (Hr'g Tr. Vol. III, Testimony of Darrell Frame, at 573:4-9; Exhibits B-11; B-12; B-13; B-14; B-15) and as recent as May 2021 (Supp. DeNovio Test. at ¶ 8). Prior to the February 2021 hearing on this matter, it was estimated that there had been at least 72 fuel release incidents involving more than 175,000 gallons of fuel. Norfleet Expert Report at 8, Appendix C. Since the initial hearing,

there has been an additional release of fuel of an unknown quantity into the environment in May 2021. Supp. DeNovio Test. at ¶ 8.

35. The evidence shows that it is likely that not all releases have been documented and that not all documented releases have volume estimates. Therefore, it is more likely than not that the identified 73 fuel release incidents and the more than 175,000 gallon release volume are both underestimates of the total number of release incidents and the total volume of fuel that has been released historically from the Red Hill facility. Norfleet Expert Report at 8-9.

36. In January 2014, the Navy reported a release into the environment of approximately 27,000 gallons of fuel from Tank 5. This release occurred during the filling of Tank 5. During the filling, alarms were triggered but operators presumed the alarms were falsely activated and did not immediately react. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 62:15-24. Although the release occurred between December 12, 2013 and January 6, 2014, the Navy did not verbally report the release to DOH until January 13, 2014. Kawata Test. at ¶ 20; Exhibits B-1; B-6. Based on this evidence, it appears that the Navy did not have in place at that time procedures to ensure timely response to and notification of the DOH of releases that could threaten the environment. There is no evidence presented that demonstrates that such notification procedures are now in place and it is therefore found that this remains a risk.

37. Following the release from Tank 5, there was a "reappearance of fuel on the lower tunnel wall after the tank was refueled" and "the monitoring well nearest to Tank 5 [showed] a signature spike of petroleum products." Hr'g Tr. Vol. I, Testimony of John Floyd, 160:17-161:7. These readings and observations show that the fuel released was not contained within the facility but rather was released into the environment.

38. A few months before the leak occurred, Tank 5 had undergone and passed a tank tightness test. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 64:14-19. This demonstrates that while tank tightness testing may show that a tank is "tight" at the time of a test, it is not necessarily predictive of future conditions that may be present. *See* Norfleet Expert Report at 67.

39. Although the Navy presented no evidence that a formal root cause analysis has been conducted concerning the Tank 5 release reported in January 2014, the Navy assumes that the leak in Tank 5 was caused by a contractor improperly performing maintenance and drilling holes through the tank. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 64:14-19; *see also id.*, Testimony of John Floyd, 162:5-9 (stating he was not aware of any root cause analysis of the 2014 Tank 5 release being conducted).

40. The Navy does not know where the fuel released from Tank 5 went or how it traversed through the environment. Hr'g Tr. Vol. II, Testimony of Frank Kern, 375:15-376:10. It conducted several investigations, but it was not able to locate any of the fuel or identify the pathways for its release into the environment. *Id.*

41. Although the Navy claims that the Red Hill facility was designed to have multiple layers of protection between the fuel and the environment, vast quantities of fuel have been released over the years, including the 2014 release from Tank 5 and the May 2021 release from the supply pipe near Tank 20. These releases have impacted the environment as is evidenced by detection of fuel and fuel constituents in the groundwater under the facility and the detections in the soil vapor monitoring probes in the rocks beneath the facility. Kawata Test. at ¶ 19; DeNovio Expert Report at 21; Supp. DeNovio Test. at ¶ 8. The fuel could only reach the environment by moving through the tank or piping walls, the concrete, the grout, and the gunite that surrounds the USTs and the facility. *See* Norfleet Expert Report at 3 (there are pathways for

leaked fuel to reach the environment as the concrete structure provides structural support, not fluid containment); *see also, e.g.*, Hr'g Tr. Vol. II, Testimony of Frank Kern, 307:22-25 (noting that fuel can move through cracks in the concrete; *id.*, Vol. III, 535:2-9 (Navy witness Dr. Gaur Johnson acknowledging that "concrete cracks" and that "fuel could go through the cracks in the concrete" into the subsurface environment). Therefore, it is found that these structural layers do not provide a meaningful barrier between fuel released from the USTs and the environment. The only true barriers for the USTs are the corroding steel liners.

42. The amount of total petroleum hydrocarbons as diesel (TPH-d) detected in Red Hill Monitoring Well 2 and other monitoring wells exceed existing DOH environmental action limits (EALs) for gross contamination and drinking water toxicity. The EAL is the amount below which the contaminants are assumed to not pose a significant threat to human health or the environment. Kawata Test. at ¶ 32; Exhibit B-16; *see also,* Hr'g Tr. Vol. V, Testimony of Erwin Kawata, 998:11-1000:3. Accordingly, it is found that the releases from the Red Hill facility pose a threat to human health and the environment.

G. Current Condition of the Facility

43. The integrity of the steel liners in the USTs is critical to ensure fuel will not be released into the environment. Norfleet Expert Report at 12. The backsides of the tanks are experiencing corrosion, as demonstrated by ten coupons that were removed from Tank 14 in 2018 as part of the Navy's destructive testing. Exhibits B-160; B-267 at BWS031009 ("The principle problem manifesting itself now may be corrosion on the exterior of the steel liner, resulting in through plate corrosion."); Exhibit B-170 at BWS024499, BWS024503 ("Current and previous inspection have found corroded areas in the steel liner requiring repair such as

pitting holes, plate thinning and, defective welds … The existing steel liner is subject to external corrosion and will continue to corrode. Over time corrosion holes will develop ….").

44. When water is present, steel is subject to corrosion. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 68:16; Jamond Test. at NAVY0026769 - NAVY0026770; Exhibit B-267 ("Water intrusion through the concrete, and collecting behind the steel liner, has been a recognized problem since original construction."); Norfleet Expert Report, at 62. Of the 10 coupons removed from Tank 14 in 2018, at least five of them were wet or damp on the exterior when extracted. *See* Exhibit B-160 at BWS023597, BWS023600, BWS023612, BWS023620. Based on this evidence, it is assumed that a significant portion of the backside of the tanks' steel liners may be exposed to moisture and are therefore experiencing corrosion.

45. The Navy relies on the USTs' surrounding concrete to act as a barrier to protect the steel liner from corrosion. While concrete can provide some protection from corrosion, this is minimized when the steel and the concrete are not in intimate contact. Of the ten coupons extracted from Tank 14 in 2018, eight were found to have at least some separation (void space) between the concrete and the steel liner. Exhibit B-160 at BWS023595 - BWS023618. Based on this evidence, there is likely a separation between the concrete and the steel liners on significant areas of all the USTs currently in use at the Red Hill facility.

46. The Navy testified that they have procedures in place to ensure that whenever fuel is moved, there are necessary steps to ensure only secured movement occurs. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 107:8-13. Even with these measures in place, on May 6, 2021, the Navy released approximately 1,000 gallons of jet fuel from supply piping in the lower access tunnel underneath the Red Hill USTs during the refilling of Tank 20 which resulted in a release to the environment. *See* Exhibit N-143A; Supp. DeNovio Test. at ¶ 8. It is therefore

found that that the Navy has not presented evidence to demonstrate that it has procedures in place to ensure the safe operation of the Red Hill facility.

47. The primary fuel release prevention method used at Red Hill is the Tank Inspection Repair and Maintenance (TIRM) process. Floyd Test. at NAVY0026817. This is a three-part process: (1) tanks are inspected with non-destructive technologies; (2) holes are drilled, tested for gas, and repaired; and (3) patch plates are welded on, inspected, and tested for integrity. *Id.* During the maintenance, portions of the interior tank steel liner are also recoated to attempt to prevent internal corrosion from occurring on the inside of each UST. *Id.* The other mitigation measures implemented at the Red Hill facility, such as tank tightness testing, groundwater monitoring, and vapor monitoring, are designed to detect releases after they happen and do not prevent releases from occurring. Hr'g Tr. Vol. V, Testimony of Erwin Kawata, 1016:17-1017:5.

48. The Navy has identified the small nozzles installed on the USTs as being a potential risk for fuel releases. Floyd Test. at NAVY0026817. Based on this conclusion, the Navy determined that the small nozzles should be replaced with larger nozzles that can be physically inspected and repaired. *Id.* To date, the small nozzle at Tank 5 is the only one that has been replaced. Hr'g Tr. Vol. I, Testimony of John Floyd, 174:16-20. The other thirteen USTs currently in operation (i.e., not undergoing maintenance) still use small nozzles, which cannot be internally inspected and present a risk. *See id.* Under the current schedule, it is anticipated that all the small nozzles on the 18 USTs still placed into service will not be replaced until 2032-2035. Hr'g Tr. Vol. I, Testimony of John Floyd, 175:1-13. For purposes of evaluating the current permit application, it is assumed that most of the USTs will not be upgraded with the large nozzles and that this identified risk will remain.

49. In 2015, the Navy changed the corrosion coating system specification for its USTs to specify the application of polysulfide interior coating to the USTs at Red Hill. Based on experience at other facilities, the Navy has determined that this coating has a better life-cycle alternative than the PFU coating previously used and would therefore provide additional protection against internal corrosion. Jamond Test. at NAVY026763. However, given that only Tank 5 has completed repair since 2015, none of the other USTs have benefitted from this identified enhanced protection. Based on the evidence presented, it is found that most of the USTs will not receive the enhanced coating during the time period for the permit application under review.

50. Tank tightness testing is a method designed to determine if a tank is leaking. It is a leak detection method and not a leak prevention method. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 59:17-19. Additionally, tank tightness testing only measures conditions found at the tank at the moment the test is done and does not measure the future condition of the tank. *Id.*, at 64:24 ("Yes, it [tank tightness testing] cannot predict the future."). It also can only detect leaks to a certain minimum level. For the Red Hill USTs, the leak detection level is at or above 0.5 gallons per hour (gph). Testimony of Christopher D. Caputi ("Caputi Test."), Letter from C. Caputi to J. McKay Re: Haw. Dep't of Health Hr'g, for Doc. No. 19-UST-EA-01; contested case draft permit for the Navy Red Hill Underground Fuel Storage Facility (Jan. 15, 2021) ("Caputi Letter") at 8. A leak that is below that level would not be detected through a tank tightness test. Hr'g Tr. Vol. II, Testimony of Christopher Caputi, 220:22-25.

51. If there was a chronic leak below the minimum established threshold of the tank tightness testing, it would not be detected. *Id.* at 221:1-19. It could continue

indefinitely until it exceeded the minimum detection threshold. *Id.* For example, a leak of around 0.4 gph, left undetected could result in an annual release of over 3,000 gallons of fuel. *Id.* at 259:25-260:18. It is concluded that a chronic leak would likely be undetected.

52. There are currently only three, two-inch diameter groundwater monitoring wells installed within the 450 feet footprint of the Red Hill USTs. DeNovio Expert Report at 14. One of these three wells was incorrectly installed and requires replacement. DeNovio Expert Report at 17. Only two of these three wells provide data regarding the constituents in groundwater at the water table below the tank. *Id.* at i. The sparsity of the groundwater monitoring network does not provide information about the overall conditions of the groundwater underlying either the Red Hill USTs or the facility and it is therefore not possible, based on the evidence in the record, to make a determination regarding the current condition of the sole source aquifer under the Red Hill facility. *Id.* at 14. The Navy has indicated that it will install additional wells (Hr'g Tr. Vol. III, Testimony of Curtis Stanley, 724:18-725:4), but such additional wells are not included in the application and therefore will not be taken into consideration.

53. The Navy has installed soil vapor monitoring probes in order to identify leaks that occur. Hr'g Tr. Vol. III, Testimony of Darrel Frame, 645:2-5; Floyd Test. at NAVY026831. When there is a release of fuel into the environment, vapors from the fuel product will be present in the soil or rocks. The monitoring probes register the volatile organic compounds (VOCs) in this vapor. This is evidenced by spikes in soil vapor in the area under the tanks following the 2014 release from Tank 5. Hr'g Tr. Vol. III, Testimony of Darrel Frame, 645:2-5. The May 2021 release resulted in similar spikes at Tanks 15, 16, 17, 18, and 20. Supp. DeNovio Test. at ¶ 8; Exhibits B-404; B-405. These types of spikes demonstrate that released

fuel has reached the environment and not been contained within the Red Hill facility. Supp. DeNovio Test. at ¶ 8.

54. There are currently insufficient procedures in place for mitigating a release from the Red Hill facility. Floyd Test. at NAVY0026819 ("It is my understanding that the Navy is working with the Regulating Agencies through the AOC to meet its mitigation requirements.").

55. The Red Hill facility is in an area subject to seismic activity and the Navy is planning to conduct a study regarding the risk that this presents. Testimony of Gaur Johnson ("Johnson Test."), at NAVY0026937. That investigation has not yet been completed. Hr'g Tr. Vol. III, Testimony of Dr. Gaur Johnson, 469:12-25. Based on information available regarding releases that occurred following the known 1948 release, it appears that ground shaking has the potential to result in releases. *See id.* at 467:5-471:25; Exhibit B-12 at BWS003966. Accordingly, there is not sufficient information to determine the level of risk associated with potential seismic activity and it must be assumed that there is some risk.

H. Risks Associated with Facility

56. The DOH has recognized that storing up to 187 million gallons of fuel 100 feet above a drinking water source is inherently dangerous. Exhibit B-21. The Navy has also recognized this risk. *See* Exhibit B-145 at BWS023203 ("potential pollution of the Red Hill potable water aquifer that lies less than 100' under the Red Hill tanks is real.").

57. At the time of the release from Tank 5 that was reported in January 2014, the Red Hill tanks were not being operated in a manner that was "fully protective of the environment." Hr'g Tr. Vol. I, Testimony of Blake Whittle, 121:3-7. Although there have been upgrades and improvements made at the facility (s*ee id.* at 106:15-107:24), the Navy has not

presented sufficient information to demonstrate that the Red Hill facility is currently being operated in a manner that is fully protective of the environment.

58. Following the 2014 Tank 5 release, the DOH concluded that operation of Red Hill "should only exist on the condition that the facility be upgraded with secondary containment and state-of-the-art leak detection to ensure safe operations and prevent adverse impacts to the environment." Exhibit B-21 at BWS006270. Secondary containment has not been installed and the leak detection methods utilized at the facility do not and cannot accurately identify or measure the corrosion that is occurring on the backside of the tanks' steel liners. Norfleet Expert Report at 16. The Navy plans to install additional leak detection measures (Hr'g Tr. Vol. I, Navy Opening Statement, 26, 32), but those measures have not been installed and are not considered as part of this permitting proceeding. Therefore, it is found that by utilizing the current operations described in the application, the Navy cannot reliably repair corrosion damage and breaches will likely occur in the future. Norfleet Expert Report at 16. This represents a significant risk to the environment.

59. As the facility is currently constructed, operated, and maintained, future releases of fuel are inevitable because the Navy is currently conducting an integrity management strategy that will not prevent future releases. Norfleet Test. at ¶ 10.a; Norfleet Expert Report at iii, 12-61.

60. Corrosion is a major threat to the Red Hill USTs. Norfleet Test. at ¶ 10.b; Norfleet Expert Report at iii-iv, 9-10, 12. The outside or backside of the steel liners cannot be directly inspected or maintained. Hr'g Tr. Vol. II, Testimony of Frank Kern, 276:3-10 (testifying that "the answer to your question is yeah, we cannot inspect that [the back side of the

Red Hill tanks], correct, visually"); Norfleet Expert Report at 12. It is not possible to determine the current conditions of the outside of the steel liners.

61. Water is present on the outside of the steel liner, and the steel liner does not have any corrosion protection. Norfleet Expert Report at 6. Therefore, corrosion is occurring at some or all the in-service USTs at Red Hill. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 71:13 ("I'm not denying that corrosion's occurring…"); Hr'g Tr. Vol. V, Testimony of David Norfleet, 1024:20-21.

62. If left untreated, corrosion can eat through steel and create through holes over time. Hr'g Tr. Vol. V, Testimony of David Norfleet, 1024:22-1025:1; Norfleet Expert Report at fig. 4, 5, 6. There have been numerous through holes in the Red Hill USTs that resulted from corrosion. Hr'g Tr. Vol. II, Testimony of Frank Kern, 309:22-24; Norfleet Expert Report at fig. 4, 5, 6. When there is a through hole that goes through the steel liner, there is no impermeable surface between the stored fuel and the environment. This means that fuel will be released into the environment. No Navy witness could testify to the precise amount of through holes that have been documented at the Red Hill facility. Hr'g Tr. Vol. II, Testimony of Frank Kern, 312:22-24.

63. The steel liners at the Red Hill facility have experienced corrosion in the past. Hr'g Tr. Vol. I, Testimony of Danae Smith, 137:19-22. When the Navy removed ten coupons of the steel lining from a UST, corrosion was found on the exterior wall of each coupon. Hr'g Tr. Vol. I, Testimony of John Floyd, 164-169; Exhibit N-032; Norfleet Expert Report at 27-29. It is therefore found that untreated corrosion on the Red Hill USTs present a significant threat to the environment.

64. The parties agree that concrete can crack. Hr'g Tr. Vol. II, Testimony of Frank Kern, 306:18-19; Hr'g Tr. Vol. III, Testimony of Gaur Johnson, 535:2-9. The concrete surrounding the tanks and the facility is more than 80 years old. The cracks in the concrete can provide a pathway for released fuel to reach the environment.

65. The fact that water has been found on the backsides of the USTs indicates that there are pathways for water to reach the steel liner through the surrounding concrete and other structural layers. Norfleet Expert Report at 27, fig. 10. This demonstrates that there are also pathways for fuel released from the USTs to reach the environment. Norfleet Expert Report at 3.

66. The Navy has not been able to find the fuel associated with known releases from the facility including the Tank 5 release and the most recent May 2021 release. Hr'g Tr. Vol. I, Testimony of John Floyd, 202:14-25 (confirming that the Navy never found the fuel from the Tank 5 fuel release).

67. While the precise location of the released fuel is not known, it is known that the released fuel has impacted the underlying sole source aquifer. DeNovio Test. at ¶ 9.b; DeNovio Expert Report at i, 31, 43. Such impacts may be irreparable, particularly given the fact that the Navy currently has no methods in place to address contamination of groundwater. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 92:15-25; Floyd Test. at NAVY0026819 ("It is my understanding that the Navy is working with the Regulating Agencies through the AOC to meet its mitigation requirements.").

68. As the parties recognize and the Navy admits, Hawaii's UST regulations were enacted to protect human health and the environment. Hr'g Tr. Vol. I, Navy Opening

Statement, 15:17-24, 19-20. Compliance with these regulations is critical to protecting the environment.

69. If the Automated Fuel Handling System (AFHS) indicates that there has been a leak from a tank, the leak cannot be addressed until the tank is drained. If a tank is full at the time of the leak, it will take between 12-24 hours to drain the tank. During this drain down time, fuel may be being released from the tank. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 62:12-14. This could constitute a significant risk to the environment.

70. Potential for human error has been and remains a significant concern at the Red Hill facility. Human error caused and/or contributed to the release of fuel to the environment on numerous occasions including the 2014 release from Tank 5 (*id.* at 62:15-24) and the most recent documented release from the pipeline under Tank 20 (Reopened Hearing Tr. at 7:15-18). Despite the Navy's efforts to add new systems, training, and policies to ensure that such errors will not result in releases, this remains a significant risk as evidenced by the May 2021 release.

71. The Navy has identified the most likely source of a catastrophic release to be a result of some failure in the pipeline system. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 72:7-11. To contain such a release, the Navy has installed a door to lock fuel released from a pipeline in the lower access tunnel. *Id.* at 72:14-21. There is no evidence that the lower access tunnel could contain the fuel and there has been no tightness testing done on the lower access tunnel. Hr'g Tr. Vol. I, Testimony of John Floyd, 200:5-18. Fuel released from a pipeline during the May 2021 spill was not contained within the lower access tunnel and was released into the environment. Reopened Hearing Tr. 7:25-8:11 ("we see elevated or pronounced spikes of soil vapor readings at Tanks 20, 17, 18, and 15 and 16 in particular…So based on that

information, the fuel from the tunnel was not contained in the tunnel, and the soil vapor probes indicate that fuel was released to the environment.").

72. The Navy hired ABS Consulting to conduct a risk assessment. The Phase 1 QRVA found that: (1) there is a greater than 27 percent probability of an acute sudden release of between 1,000 and 30,000 gallons of fuel from the Red Hill Facility each year (Exhibit B-15 at BWS005021; *see also* Hr'g Tr. Vol. III, Testimony of Darrel Frame, 575:9-10); (2) there is a greater than 34 percent chance of a sudden release of more than 120,000 gallons of fuel from the Red Hill Facility within the next 100 years (Exhibit B-15 *see also* Hr'g Tr. Vol. III, Testimony of Darrel Frame, 576:7-8); and (3) the expected volume of chronic, undetected fuel releases from the Red Hill facility is 5,806 gallons per year (Exhibit B-15 *see also* Hr'g Tr. Vol. III, Testimony of Darrel Frame, 577:4). The Navy agrees that these levels of risks are unacceptable. Hr'g Tr. Vol. III, Testimony of Darrel Frame, 575-576.

73. In the event of a fuel release into the groundwater, the Navy has not presented any evidence or testimony to demonstrate that it has committed to any meaningful plans, procedures, or arrangements to treat impacted groundwater. *See, e.g.*, Hr'g Tr. Vol. I, Testimony of Blake Whittle, 74-75. Commander Whittle speculated that the Navy would likely pump the contaminated groundwater by using the existing Red Hill pumps and send it to an existing wastewater treatment facility. *Id.* at 74:6-11. Commander Whittle, however, acknowledged that this would only be a temporary solution based on the existing infrastructure. *Id.* at 74:9-11. Additionally, he admitted that the Navy does not have any arrangement with an existing wastewater treatment facility to treat contaminated groundwater. *Id.* at 74:25-75:2 ("I don't know if [arrangements with a wastewater treatment facility] have been fully fleshed out, but that's what I would recommend."). Mr. Floyd testified that the Navy is currently working

with state agencies on these issues but did not provide any evidence regarding any procedures that would be implemented if there was a release today or during the proposed permit timeframe. Floyd Test. at NAVY0026820.

74. The Navy is required to update its Groundwater Protection Plan every five years. Exhibit B-373 at BWS040922. Based on the evidence in the record, the Groundwater Protection Plan has not been updated since 2014, more than seven years ago. *Id.*; Hr'g Tr. Vol. I, Testimony of Blake Whittle, 91:23-92:1 (admitting that he was not aware of any update having been done to the Groundwater Protection Plan). No other Navy witness presented evidence which demonstrated that the Navy has such arrangements in place. Accordingly, it is found that the Navy does not have measures in place to address groundwater contamination were it to occur during the proposed permit time frame.

75. The Navy has not been able to determine what has happened to the fuel that has been released from the Red Hill facility. However, for the 2014 release of approximately 27,000 gallons of fuel from Tank 5, the Navy acknowledges that fuel reached the rock and the Navy's monitoring showed spikes in soil vapor monitoring. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 109:5-22.

76. It is critical to understand the direction and rates of groundwater flow, along with potential pathways for constituents, in order to assess the risk associated with releases from the Red Hill facility. DeNovio Expert Report at 18. The record does not include sufficient information to assess the direction and rates of groundwater flow. Therefore, it must be assumed that fuel released from the facility presents a risk to the underlying groundwater aquifer and ultimately to the State's drinking water.

77. It has been conclusively demonstrated that fuel released from the Red Hill facility has reached the environment, including the sole source aquifer under the facility. *See* Exhibits B-373 at BWS040922 ("Previous environmental Site Investigations (SIs) at the Facility showed that past inadvertent releases have contaminated the fractured basalt, basal groundwater, and soil vapor beneath the Facility with petroleum hydrocarbons."); B-11 at BWS003849 ("site investigations have shown evidence of fuel releases which have resulted in contamination of the rock bed, soil, and groundwater surrounding the RH tanks."). Following the 2014 release from Tank 5, fuel traveled through the 20-foot thick reinforced concrete plug the tanks rest upon and stained the wall in the lower access tunnel. Hr'g Tr. Vol. I, Testimony of John Floyd, 184:5-13.

78. Evidence of prior fuel releases impacting the environment is also documented by the observation of the drill core from borings removed during a subsurface investigation that contained staining, odors, sludges, and sheens from fuel products. DeNovio Expert Report at 25-28. Data from soil vapor monitoring further supports this conclusion. *Id.* at 29-31.

79. There is evidence that the environment around the Red Hill facility has some ability to hold released fuel and that there is natural attenuation that can remediate fuel given sufficient time. *Id.* at 37. There is not, however, evidence in the record to establish a reliable rate of attenuation or to conclude that this rate is sufficient to eliminate risks to the groundwater following releases. *Id.* at 29-31. Therefore, the Navy has not demonstrated that the fuel previously released does not represent a risk to human health and the environment nor that future releases will not pose such a threat.

I. Maintenance of Facility

The Tanks

80. The only way to ensure the integrity of the steel liners is through a vigorous and thoroughly reliable inspection and repair program. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 75:22 ("inspections are critical to the facility."). Conducting reliable and appropriate API 653 inspections, which is the Navy's method for testing the integrity of the USTs, is critical to the safe operation of the Red Hill facility. Hr'g Tr. Vol. II, Testimony of Frank Kern, 277:1-5. The majority of tanks have not undergone API 651 inspections. *Id.* at 278:5-281:18.

81. Under API 653, the maximum allowable interval for inspections is 10 years. Exhibit B-6 at BWS001329. Although the Navy has a policy that each UST should be inspected every 10 years unless the corrosion rate is such that an API 653 inspector recommends it can be inspected in 20 years (*id.*), the record shows that the USTs that have been inspected have often exceeded the 20-year target interval in between inspections. Exhibit B-30. The current inspection rate interval is averaging 30 years, with the longest duration being 59 years for Tank 18. *Id.*; *see, e.g.*, Hr'g Tr. Vol. I, 189:7-194:15 (Navy witness Mr. John Floyd recognizing that Red Hill tanks 3, 4, 7, 8, 9, 10, 11, and 12 either have no inspection history or are "overdue for an inspection"); Hr'g Tr. Vol. II, 277:11-280:1 (Navy witness Mr. Frank Kern conceding that the majority of the Red Hill USTs have not undergone the inspection process that the Navy itself claims is the proper standard of care and that more than a quarter of the Red Hill USTs have never undergone any formal API inspection); Hr'g Tr. Vol. III, 277:11-280:1 (Navy witness Darrel Frame admitting that "we have not met or [sic] timeline on some of our tanks" and that at

least eight USTs have not had a major API 653 inspection once every twenty years as required by Navy standards).

82. An inspection program is only reliable if it can detect any and all areas that are vulnerable to corrosion and effectively repair these areas prior to a through hole developing in the steel liner or a failure occurring at a weld. Norfleet Expert Report at 12.

83. In order to ensure that conditions needing repairs are detected prior to there being a through hole, failure of a weld, or other condition that could result in a release from the USTs, the inspection period must be set such that the tank will be re-inspected and repaired prior to such conditions developing. *Id.*; *see also* Hr'g Tr. Vol. III, Testimony of Frank Kern, 297-298. The Navy uses a corrosion rate of 3 mils per year to set its inspection schedule and relies on an assumed steady rate of corrosion. Hr'g Tr. Vol. III, Testimony of Frank Kern, 297:2-15. However, corrosion does not occur at a linear rate. *Id.* at 299:25-16. If the Navy's estimates were accurate, there would not be any through holes for approximately 83 years. *Id.* However, there has been numerous instances of through holes developing during the operational life of the Red Hill USTs. There were through holes found in 1998. Hr'g Tr. Vol. II, Testimony of Frank Kern, 299 (regarding two through holes in Tank 2), 310-311 (regarding 6 through holes found in Tank 16), 357; Hr'g Tr. Vol. V, Testimony of David Norfleet, 1063:7-21. If it is assumed that the corrosion started at the time of the USTs' construction, then the corrosion growth rate would be 4.5 mils per year based on the 1998 through holes. Hr'g Tr. Vol. V, Testimony of David Norfleet, 1063:7-21. This estimate is not conservative, as it assumes without any evidence that the corrosion began at the time of construction. *Id.* If the corrosion did not begin at the time of construction, the corrosion rate would be even higher than these

estimates. *Id.* Accordingly, there is a documented rate of corrosion that is higher than the rate relied on by the Navy.

84. Although the Navy's presumed corrosion rate may be sufficient to ensure some of the tanks are inspected in a time frame that will identify certain significant corrosion areas in need of repair before through holes or other failures occur (Hr'g Tr. Vol. II, Testimony of Frank Kern, 300-303), there will likely be other areas, particularly corrosion outliers, where the corrosion rate is higher than what has been assumed. *Id.* The risk of through holes developing is increased when the tanks are not inspected within the 20-year timeframe. Accordingly, it is found that the corrosion rate on which the Navy uses to set its inspection intervals is not sufficiently protective of the environment. This conclusion is consistent with the DOH and EPA's conclusion that the Navy is underestimating corrosion rates based on the destructive testing conducted at Tank 14. Exhibit N-044 at NAVY0010372.

85. The Navy uses non-destructive examination (NDE) methodologies to indirectly inspect the backside of the Red Hill USTs' steel liners. Norfleet Expert Report at 13. The inspections are conducted primarily by individuals manually inspecting the interior surface of a tank with a hand-held sensor. *Id.* The inspections rely heavily on the skill of the operator and the accuracy of the hand-held scanners. At Red Hill, this requires individuals to manually scan large surface areas which are roughly 30% larger than the size of a football field. *Id.* at 14. The inspectors are required to move a hand-held scanner over the surface of the tanks while monitoring a computer screen to note possible defects. *Id.* at 15. The inspectors do this task while working off a suspended scaffolding while the USTs are illuminated by artificial lights. *Id.* Given the scale of the tanks and the conditions under which the inspections occur, these methods are inherently unreliable. *Id.* at 13.

86. As part of the AOC process, the Navy was required to assess the effectiveness of its NDE methods. Through this process, Tank 14 underwent an NDE inspection to ascertain the then-existing conditions of the tank. Ten coupons were removed and sent to a laboratory for testing to see if the NDE methods were valid. Of the ten coupons, five of the readings were found to be inaccurate. Exhibit B-160; Hr'g Tr. Vol. II, Testimony of Robert Jamond, 201-207; Norfleet Expert Report at 33, tbl. 4, fig. 12; *see also* Hr'g Tr. Vol. III, 418:9-20 (Navy witness Mr. Robert Jamond agreeing that NDE was only accurate in detecting actionable metal loss 50 percent of the time in the ten coupon samples). Based on this data, the Navy's NDE process is determined to not be reliable in accurately identifying areas where repairs are needed. This creates a risk to human health and the environment.

87. The Navy interpreted the destructive testing results as indicative of a sound tank inspection process. The DOH and the EPA disagreed and found that the Navy's destructive testing did not validate the Navy's TIRM process and directed the Navy to take further actions. Exhibit B-30. The inadequacy of the Navy's TIRM process is so apparent that the regulators and the Navy have all agreed to take the extreme step of invoking AOC Section 5.4, which is only to be implemented "[i]f the Parties determine that the results of the previous deliverables in this Section [AOC Section 5 – Corrosion and Metal Fatigue Practices] indicate the need for evaluation and implementation of potential changes in practices to control corrosion or metal fatigue." Exhibit B-82 at BWS008976. If so, the Navy must take action "for the purpose of developing appropriate modification to the scopes of work and timelines in Section 2 [Tank Inspection, Repair, and Maintenance] and/or Section 3 [Tank Upgrade Alternatives]" and AOC "deliverables shall be modified or added … to address any needs for further evaluation, development, or implementation of practices to control corrosion or metal fatigue." *Id.* These

further actions have not yet been completed and the tank inspection process in the application is the same as that which was found to be inadequate by the agencies. At this time, the Navy has not demonstrated that it can reliably identify areas on the USTs that need repair.

88. The amount of corrosion that is repaired following an inspection has increased over time. Hr'g Tr. Vol. II, Testimony of Frank Kern, 281:12-18. Inspections have uncovered large areas where corrosion is significantly weakening the backside of the tank. *Id.* at 278, 314-315 (noting that last time Tank 13 was inspected in 1995, large areas of backside corrosion were found requiring repairs). In such cases, the Navy has had to remove and replace large areas of plates. *Id.*; *see also id.* at 284 (noting that an inspection completed on Tank 13 in 2017 or 2018 found large areas of backside corrosion requiring the replacement of an area of greater than 2 square feet in each location); Exhibit B-297 at BWS031345 (same).

89. Based on the most recent inspections, it appears that on average 1 to 2 percent of the inside of a tank requires repair due to corrosion, representing approximately 8,000 to 16,000 square feet. Within each of these areas, there could be multiple areas where failure of the steel could occur as a result of the corrosion. Hr'g Tr. Vol. II, Testimony of Frank Kern, 350-351. Although the Navy's intent and standard of care is not to allow areas to corrode to failure, such failures have occurred and are anticipated to continue to occur under the Navy's current inspection, maintenance, and repair programs.

90. Based on the evidence presented, it is likely the tanks that have not been inspected have the same defects and corrosion. *See, e.g.,* Norfleet Expert Report at 17-26. Those defects and corrosion have not been repaired and therefore make the USTs vulnerable to releases.

The Pipelines

91. The pipelines are inspected daily by roving patrols and inspected and certified by an American Petroleum Institute 570 standard inspector so that the pipelines are suitable and safe for service. The pipelines are not required to have secondary containment given that they can be visually inspected in the access tunnel. Whittle Test. at NAVY0027281. Despite these inspections, leaks have and can occur from pipelines. Norfleet Expert Report at tbl. 8. The May 2021 release demonstrates that pipeline leaks can result in fuel releases to the environment.

J. Administrative Order of Consent

92. In September 2015, the Navy and the Defense Logistics Agency (DLA) – the owner of the fuel stored at Red Hill – entered into an administrative order of consent (AOC) with the EPA and the DOH requiring the Navy to conduct certain investigations and other work to address fuel releases from Red Hill. The AOC includes a Statement of Work (SOW) that outlines steps "necessary to address potential impacts to human health, safety and the environment … due to historical, recent and potential future releases at the [Red Hill] Facility." Exhibit B-81 at BWS008935. While the AOC does not purport to evaluate the Navy's ability or inability to comply with Hawaii's UST regulations, much of the work conducted under the AOC relates to issues that are of concern in this proceeding.

93. The AOC consists of eight sections including: "Section 1: Overall Program Responsibility; Section 2: Tank Inspection, Repair, Maintenance (TIRM); Section 3: Tank Upgrade Alternatives; Section 4: Release Detection/Tank Tightness Testing; Section 5: Corrosion and Metal Fatigue Practices; Section 6: Investigation and Remediation of Releases;

Section 7: Groundwater Protection and Evaluation; and Section 8: Risk/Vulnerability Assessment." *Id.* at NAVY0026882 - NAVY0026883.

94. To date, many of the deliverables required by this order still have not been approved by the regulators, with key Navy reports disapproved and the Navy tank upgrade proposal rejected. *See, e.g.* Exhibits B-30; B-15; B-28.

95. Under Section 2 of the AOC, the Navy was required to develop TIRM procedures. Although the EPA and DOH approved the TIRM procedures in 2017 (Panthen Test. at NAVY0026888), these procedures need to be updated and revised given that the destructive testing conducted under Section 5 showed that the Navy NDE procedures were not sufficiently reliable. *See* Hr'g Tr. Vol. II, Testimony of Frank Kern, 347:13-348:4; Norfleet Expert Report at 33, tbl. 4, fig. 12; *see also* Hr'g Tr. Vol. III, 418:9-20 (Navy witness Mr. Robert Jamond agreeing that NDE was only accurate in detecting actionable metal loss 50 percent of the time in the ten coupon samples).

96. Under Section 3 of the AOC, the Navy is required to evaluate alternatives and to identify in the Tank Upgrade Alternative (TUA) document the best available practicable technology (BAPT) to utilize at the Red Hill facility. Panthen Test. at NAVY0026888. The Navy submitted a TUA Decision Document on September 9, 2019. *See* Exhibit N-101. The EPA and the DOH denied the Navy's TUA Decision Document because it lacked "detail, clarity, rationale and justification to demonstrate that the actions described in the Decision Document are the best available practicable technology ('BAPT') for the tanks and operation at the Red Hill Facility." Exhibit N-075 at NAVY0011689 - NAVY0011690. The Navy has produced no evidence in this proceeding to document that they have provided further detail, clarity, rationale,

or justification to show that the facility as currently proposed is protective of the environment or any additional measures that will potentially be implemented in the future to meet this standard.

97. In rejecting the TUA Decision Document, the regulatory agencies found that the Navy had not demonstrated that the proposed alternative was the most protective of groundwater and drinking water resources and other options are either less protective or impractical, and that the proposed alternatives adequately mitigated risk. Exhibit N-075 at NAVY0011692 - NAVY0011701. Given that the operation measures proposed in the current application include less protective measures than included in the alternative proposed in the rejected TUA Decision Document, there is no evidence that the operation measures described in the application are adequate to mitigate the risks posed to groundwater and drinking water.

98. Section 4 of the AOC requires the Navy to evaluate the release detection and tank tightness testing procedures implemented at Red Hill and to modify them to be more protective of the environment. *See, e.g.,* Panthen Test. at NAVY0026891. The Navy has increased the frequency of its tank tightness testing under this provision.

99. Section 5 of the AOC requires the Navy to develop a scope of work to evaluate the possibility and extent of corrosion and metal fatigue at the tanks at Red Hill. The Navy is also required to develop best practices to control corrosion and metal fatigue at the tanks. Testimony of Robert Jamond ("Jamond Test.") at NAVY0026763. As part of the SOW, the Navy completed destructive testing designed to validate the NDE inspection methods used. Panthen Test. at NAVY0026893. The destructive testing report demonstrated that the NDE methods were only accurate 50% of the time, yet the Navy indicated that the destructive testing results indicated that the Navy's NDE methods were validated. Exhibit B-14 at BWS004832. The DOH and EPA did not concur with the Navy's conclusion that the NDE results were

validated and disapproved the results of the report. Hr'g Tr. Vol. II, Testimony of Robert Jamond, 422:17-22; Exhibit B-30. The Navy has been ordered to take significant action, conduct additional study, and research into the TIRM process, the sources of corrosion, and possible actions to reduce corrosion rates. *Id.* Until these actions, studies, and analyses are completed, the Navy cannot demonstrate that these measures are reliable.

100. Sections 6 and 7 of the AOC, relating to the investigation and remediation of releases and groundwater modeling, required the submittal of a proposed SOW. On September 15, 2016, the EPA and DOH disapproved the Navy's proposed SOW to comply with Sections 6 and 7. Exhibit B-328. The Regulatory Agencies found that there were several significant flaws in the proposed study approach and assessment. *Id.* On December 2, 2016, the EPA and DOH conditionally approved the Section 6 and 7 SOW but required that the Navy address all the deficiencies identified in the September 15, 2016 letter and attachments. Exhibit B-330. In February of 2018, the EPA and the DOH provided additional comments that were intended to set forth additional processes for modeling groundwater in relation to the work plans. The comments identified a number of concerns with the Navy's proposal, including that the conceptual site model is not sufficiently supported by the data collected to date, that the Navy and its consultants are drawing conclusions prematurely "about key aspects of the model that strongly influence groundwater flow and contaminant fate and transport," that the Navy had not "presented a strategy and framework for evaluating the uncertainty associated with the results obtained from the model," and that the "initial analysis of Non-Aqueous Phase Liquid transport, fate and transformation in the unsaturated zone is not likely to be conservative and appears inconsistent with data collected at the site." Exhibit B-345 at BWS037404. The Navy has not

produced documentation in this record to demonstrate that these issues have been addressed. Accordingly, the groundwater studies produced in these proceedings will be given little weight.

101. Section 8 of the AOC requires the Navy to develop a Risk/Vulnerability Assessment. The Phase 1 of the Risk Assessment was completed by ABS and as previously found, showed a high level of risks for both acute and chronic releases. Exhibit N-031. Phase 2 of the Risk Assessment, which must consider risks associated with external factors such as earthquakes, was disapproved by the EPA and the DOH. Panthen Test. at NAVY0026896; Exhibit N-084.

K. Legal and Regulatory Requirements

Applicability of Regulatory Requirements

102. The Red Hill facility is subject to HAR § 280.1-10(a)(1)(A) and § 280.1-323(a) requiring the Navy obtain a permit for operating the facility after demonstrating that it can meet the requirements of State law. Hr'g Tr. Vol. I, Testimony of Danae Smith, 126:2-11, 135:3-16. The HAR provides the rules by which the Red Hill facility must comply. *Id.*, Testimony of John Floyd, 205:7-17.

103. The Navy is subject to other state law permitting requirements for UST facilities. *Id.*, Testimony of Blake Whittle, 112:2-11.

104. There has not been a determination that the Red Hill USTs comply with Hawaii State UST regulations. Mr. Floyd's testimony that the USTs have met the agencies' determined compliance is not supported by evidence in the record.

Leak Prevention

105. State law requires that all USTs be operated and maintained in a manner that prevents leaks. Hr'g Tr. Vol. I, Testimony of Danae Smith, 129:4-130:12. There have been

numerous leaks from the Red Hill facility in the past. *Id.* at 131:1-11; Norfleet Expert Report at 8, Appendix C; Exhibits B-12; B-10; B-15; B-193; B-196; B-198; B-232; B-276; B-296; B-306; B-307. There is evidence that such leaks are likely to continue. Norfleet Expert Report at 49-61. Specifically, the record shows that given the current condition of the steel liner and the concrete, the only way to ensure leaks do not occur is if the Navy can reliably and accurately detect and repair tank defects in the steel liner and tank system before they occur. *Id.* at 12. Based on destructive testing, the Navy's inspection and maintenance process was found to not be validated. *See* Exhibit B-30. The Navy has not demonstrated that through its current TIRM process, it can identify and repair tanks at Red Hill before corrosion defects breach the internal surface of the steel liners. Norfleet Expert Report at 27. Accordingly, the Navy has not demonstrated that it can prevent fuel releases at Red Hill during the proposed permit term.

Appropriate Construction Materials

106. The Red Hill UST steel liners are compatible with the fuel stored therein. Smith Test. at NAVY0027318; Jamond Test. at NAVY0026773.

Corrosion Protection

107. Under State law, all USTs that routinely contain a regulated substance must be protected from corrosion. HAR § 11-280.1; Smith Test. at NAVY0027319; Hr'g Tr. Vol. I, Testimony of Danae Smith, 127. These provisions apply to the tanks at Red Hill. Hr'g Tr. Vol. I, Testimony of Danae Smith, 135:12-136:14. There are several ways that a tank can meet this requirement. *Id.* at 136:23-137:2. In the Navy's application for Red Hill, it indicated that it met this requirement because it is clad or jacketed with a non-corrodible material. *Id.* at 135:16. There is no evidence that the Red Hill tanks meet the definition of "clad or jacketed" under HAR § 11-280.1-26(b). *Id.* at 136:15-137:2 (Navy witness Ms. Danae Smith admitting

that she could not identify any of the enumerated codes of practice listed in HAR § 11-280.1-26(c) that the Navy uses to comply with mandated corrosion protection requirements). It is found, therefore, that the Red Hill tanks do not meet this standard.

108. Pipelines that routinely contain a regulated substance and come in contact with the ground must be protected from corrosion. Smith Test. at NAVY0027319. Pipelines leading from Red Hill to the pump house are considered aboveground pipelines because they can be visually inspected. They are not subject to corrosion protection requirements. *Id.* at NAVY0027320. The pipelines that are underground are cathodically protected by an impressed current system. *Id.*

Release Detection

109. Hawaii State law provides that field-constructed USTs may satisfy leak detection requirements if they pass an annual tank tightness test that can detect a 0.5 gph leak rate. HAR § 11-280.1-40(a); HAR § 11-280.1-43(10)(A); Smith Test. at NAVY0027321.

110. The Navy relies on tank tightness testing methodology that has been approved by independent third parties. Hr'g Tr. Vol. II, Testimony of Christopher Caputi, 228-232. However, neither the Navy nor its consultants have independently verified that the equipment used during a specific tank tightness test is working correctly nor have they evaluated the raw data from the tank tightness tests. *Id.* The DOH has requested the raw data but such data has not been provided. *Id.* at 233. Although the Navy presented arguments as to why this information was not required, the DOH has not concurred with this assessment. *Id.* at 235. Neither the Navy nor its consultant MBI verifies the accuracy of the tank tightness testing. *Id.* at 235-237. Therefore, there is not sufficient information in the record to conclude that the Navy's

semi-annual tank tightness testing meets the 0.5 gph leak rate standard. *See id.* at 230; Smith Test. at NAVY0027321; Caputi Test. at 2.

111. HAR § 11-280.1-33 requires that any UST that has been repaired must pass a tank tightness test in accordance with § 11-280.1-43(3) which requires that a tank meet a 0.1 gph rate tank tightness test. Smith Test. at NAVY0027323.

112. The tank tightness test currently being done semiannually on the in-service USTs at Red Hill does not evaluate the ability to detect a leak of 0.1 gph. HAR § 11-280.1-43(3); Floyd Test. at NAVY0026842 ("a leak of less than 0.5 gph from any of the tanks may not be detected with the facility's annual tank tightness testing, even though tank level systems may be able to detect smaller inventory losses."); Hr'g Tr. Vol. I, Testimony of Danae Smith, 40:2-12 (testifying that the Navy only applied the 0.5 gph standard when it tested Tank 5 prior to returning it to service after repair and that the Navy has not asked its release detection vendor to meet the 0.1 gph standard).

113. When the Navy returned Tank 5 to service after it was repaired, it did not comply with this State law requirement. Hr'g Tr. Vol. I, Testimony of Danae Smith, 140:8-9 (stating that the Navy tested Tank 5 only to the 0.5 gph standard for the tank tightness test prior to returning it to service). The Navy has presented no evidence regarding its ability to conduct a tank tightness testing to the 0.1 gph standard. Therefore, it is found that the Navy has not met its burden of demonstrating that it can comply with this regulatory requirement.

114. The underground pipelines at Red Hill meet the regulatory requirements for tightness testing. Smith Test. at NAVY0027322.

Secondary Containment

115. Under State law, all USTs will be required to utilize secondary containment or to have a design that the Director of the DOH determines is sufficiently protective of human health and the environment. Smith Test. at NAVY0027332. Secondary containment systems must (1) contain regulated substances leaked from the primary containment until they are detected and removed; (2) prevent the release of regulated substances to the environment at any time during the operation life of the UST system; and (3) be checked for evidence of a release at least every 31 days. *Id.* UST systems with field-constructed tanks are to be upgraded to secondary containment no later than twenty years after the effective date of the DOH's UST rules; that is, by July 15, 2038. HAR § 11-280.1-21(c).

116. There is no secondary containment currently utilized at Red Hill. The Navy is beginning to conduct a feasibility study to determine if there is an existing technology that could be implemented at Red Hill. The Navy has not made any determination or commitment to implement this or any other technology at this point. Hr'g Tr. Vol. II, Testimony of Frank Kern, 266-272. The application for the current permit does not reference any secondary containment technology that will be installed. There is no evidence in the record that demonstrates that the Navy has plans to install secondary containment during the 5-year permit term if the DOH decided to issue the permit. *Id.*

117. It is feasible for the Navy to install tank-within-a-tank secondary containment at Red Hill. *Id.* at 272; Exhibit B-174 at BWS025105. Secondary containment would allow the Navy to utilize additional and significant corrosion control, and inspection and containment measures. *See, e.g.,* Hr'g Tr. Vol. V, Testimony of David Norfleet, 1096.

Closure of Tanks

118. When a field constructed UST, such as the tanks at Red Hill, is permanently closed, State law requires that the tank be removed from the ground, filled with an inert solid substance, or closed in a way that is approved by the DOH. HAR § 11-280.1-71(c); Smith Test. at NAVY0027336. Two Red Hill USTs (Tanks 1 and 19) have been permanently closed but they have not been removed or filled. Smith Test. at NAVY0027336. There is no written DOH approval of an alternative plan, but the Navy believes that the current approach was approved. *Id.*

Protection of Human Health and the Environment

119. Public Trust principles in the Hawaii Constitution require that the DOH protect groundwater. *See* Haw. Const. art. XI, §§ 1 & 7. The DOH can only approve the permit application if it determines that the facility is operated in a manner that is protective of human health and the environment. *Id.*

120. Given the large number of historic leaks, the Navy's inability to demonstrate that it can maintain and repair the tanks in manner that will prevent such leaks in the future, the uncertainty regarding where released fuel is located, coupled with the evidence that released fuel has reached the groundwater, and the critical nature of the sole source aquifer located under the facility, it is found that as proposed in the permit application, the Red Hill facility is not operated in a manner that is protective of human health and the environment.

L. Adverse Credibility Determinations

Commander Blake Whittle

121. Commander Blake Whittle was the Fuels Officer for the Naval Supply Systems Command Fleet Logistics Center Pearl Harbor from June 2017 to June 2020. Whittle

Test. at NAVY0027265. In this role, he was responsible for ensuring that the Red Hill facility was operated in a manner that was protective of human health and the environment. *Id.* at NAVY0027266. Commander Whittle served as one of the Navy's leads in the UST permitting process and signed the permit application. *Id.* at NAVY0027275.

122. Commander Whittle testified that the lower access tunnel could contain fuel released and prevent releases to the environment, including a catastrophic release of one million gallons of fuel. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 72:22-23. However, the Navy was unable to contain the recent release on May 6, 2021 of a reported estimate of approximately 1,000 gallons of jet fuel. As noted above, fuel from the recent release was not contained in the access tunnel and there was a release of fuel into the environment. Supp. DeNovio Test. at ¶ 8; Reopened Hearing Tr. 23:11-23 ("we can tell that the soil vapor monitoring probes over quite a long time – several weeks – are indicating the presence and persistence of concentrations that indicate fuel or fuel constituents [in the environment]."). Therefore, his testimony regarding the ability of the tunnel to contain fuel is not given significant weight.

123. Despite the fact that Commander Whittle was responsible for ensuring that Red Hill is operated in a way that is protective of the environment, under cross-examination, he was not able describe any specific plan that the Navy has in place for addressing groundwater contamination in the event of a large release. Hr'g Tr. Vol. I, Testimony of Blake Whittle, 74:1-75:23. When reminded during re-direct questioning by the Navy's counsel that the Navy has a Groundwater Protection Plan (Exhibit B-373), Commander Whittle testified that this Plan contains the "actions that would be recognized to remediate a large release." Hr'g Tr. Vol. I, Testimony of Blake Whittle, 90:11-13. However, he was not able to describe what those

measures are or how they would be carried out. *Id.* at 91:10-92:25. His testimony regarding the content of the Plan should be given little weight and the fact that no Navy witness provided written or oral testimony that explained how this Groundwater Protection Plan would be carried out supports the conclusion that the Navy is not ready to activate a comprehensive strategy to address contaminated groundwater if there is a large release.

Ms. Danae Smith

124. Danae Smith is the Environmental Compliance Program Manager at the Naval Systems Supply Command Naval Petroleum Office. In this role, she is tasked with ensuring compliance with all federal and state regulatory programs at the Navy's fuel storage sites, including Red Hill. Smith Test. at NAVY0027313 - NAVY0027314.

125. Ms. Smith testified that she believed that the report prepared by the Navy's consultant ABS which documented that there were around 60 historic leaks from Red Hill is wrong given that it was based on incomplete records. Hr'g Tr. Vol. I, Testimony of Danae Smith, 132:6-133:2. Ms. Smith did not reference any documents to support this conclusion. This conclusion is found to be uncredible.

126. Ms. Smith testified that the Red Hill tanks could meet the State law leak detection requirements. She admitted, however, that repaired tanks could not meet the specific State law required leak detection. Hr'g Tr. Vol. I, Testimony of Danae Smith, 140:3-4 ("We have not asked the test vendor to meet that standard, so I cannot confirm that."). Her testimony that these provisions did not apply to the Red Hill facility is unsupported and not credible. Smith Test. at NAVY0027318 - NAVY0027319 (incorrectly claiming that "HAR § 11-280.1-20(b) and (c) state that each tank and any piping 'that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and installed, and any portion

underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory."); Hr'g Tr. Vol. I, Testimony of Danae Smith, 126:12-128:7 (Ms. Smith correcting her previous testimony at NAVY0027318).

127. Ms. Smith testified that, following the 2014 release, the DOH and EPA granted an exception to the requirement that the Navy locate the fuel that had been released. Smith Test. at NAVY0027331. Ms. Smith was not able to confirm how this approval was provided or offer any personal knowledge regarding such an approval. Hr'g Tr. Vol. I, Testimony of Danae Smith, 141:19-142:9. Given the lack of personal knowledge, this evidence will not be given weight.

128. Ms. Smith testified that the DOH waived the State law requirement that the two tanks permanently taken out of service needed to be removed or filled with an inert substance. Hr'g Tr. Vol. I, Testimony of Danae Smith, 144:4-19. Ms. Smith testified that she does not have personal knowledge of how that approval was obtained. *Id.* Given the lack of personal knowledge and documentation, this testimony will not be given weight.

Mr. John Floyd

129. John Floyd is the Deputy Director of the Regional Fuel Department for Naval Supply Systems Command, Fleet Logistics Center Pearl Harbor. Floyd Test. at NAVY0026804. Mr. Floyd is responsible for ensuring that Red Hill is maintained and operated in accordance with federal and state law. *Id.* at NAVY0026806.

130. Although Mr. Floyd is charged with overseeing the maintenance of Red Hill, he had no knowledge about whether there were any changes to the TIRM procedures in response to the Regulatory Agencies disapproval of the Destructive Testing Report. Hr'g Tr.

Vol. I, Testimony of John Floyd, 173:11-25. While Mr. Floyd is found to be knowledgeable about the TIRM procedures, Mr. Floyd's testimony regarding the adequacy of the TIRM procedures is not given weight.

131. In his written testimony, Mr. Floyd stated that, during an inspection conducted in October 2020, "no fuel leaks or visible staining of fuel was found at any of the operational Red Hill storage tanks, surge tanks, above ground storage tanks, Hickam fuel storage tanks, hydrants or any of the pipelines." Floyd Test. at NAVY0026848. However, when asked under cross-examination about a stain that is visible under Tank 5, Mr. Floyd admitted that there was still a fuel stain in this area. Hr'g Tr. Vol. I, Testimony of John Floyd, 183:16-21. Further, on cross-examination, Mr. Floyd admitted that there has been no final report issued regarding the 2020 inspection and that despite his testimony to the contrary, there has been no major finding conveyed at this point. *Id.* at 196:12-18. Mr. Floyd's testimony regarding the results of the October 2020 inspection is found to not be credible.

132. In his written testimony, Mr. Floyd stated that the five Petroleum, Oil and Lubricant Subject Matter Experts who conducted the 2016 inspection of the facility were selected by the DOH. Floyd Test. at NAVY0026839. Under cross-examination, Mr. Floyd acknowledged that this statement was incorrect, stating that they were under contract with the EPA Region 9. Hr'g Tr. Vol. I, Testimony of John Floyd, 197:14-19.

Mr. Christopher Caputi

133. Christopher Caputi of Michael Baker International works with DLA Leak Detection and has been charged with executing thousands of regulatory required leak detection or release detection events at over 200 Department of Defense facilities, including the Red Hill

facility. Testimony of Christopher D. Caputi, at 1; Hr'g Tr. Vol. II, Testimony of Christopher Caputi, 219:7-11.

134. Although on re-direct, Mr. Caputi testified that the Red Hill tank tight testing is calibrated to detect a leak of 0.36 gph (Hr'g Tr. Vol. II, Testimony of Christopher Caputi, 249:22-25), this testimony was not consistent with documentary evidence indicating that the Navy's tank tightness testing test was only reported to a 0.5 gph level of sensitivity and it is contradicted by other Navy witnesses. Accordingly, this testimony is not given weight.

Mr. Frank Kern

135. Frank Kern is the technical lead in charge of managing the inspection and maintenance program at Red Hill. Hr'g Tr. Vol. II, Testimony of Frank Kern, 264:24-265:7.

136. Although Mr. Kern was the only Navy witness that testified regarding the possibility of the Navy to install secondary containment, he stated under oath that he is not an expert in this technology and has no personal knowledge of what it would specifically involve or when it would likely be implemented. *Id.* at 272:6-273:14. Mr. Kern testified that he did not believe that it was feasible for the Navy to currently construct secondary containment. *Id.* As was raised during his cross-examination to which he had no response, the Navy's Tank Upgrade Alternative document (Exhibit B-174 at BWS025105) found that such construction is feasible. Hr'g Tr. Vol. II, Testimony of Frank Kern, 273:11-14. Based on Mr. Kern's lack of expertise and personal knowledge, as well as the official findings made by the Navy in the TUA document, it is found that Mr. Kern's testimony regarding the feasibility of installing secondary containment is not credible.

137. Mr. Kern testified that the Navy does not consider areas where the corrosion rate has been much faster than average, areas that he describes as "outliers," in

calculating the appropriate and necessary inspection schedule. *Id.* at 301:14-15. Mr. Kern provides no support for his conclusion that this is adequately protective of the environment and consistent with agency practices. These conclusions are not given weight.

138. Mr. Kern testified that he was present when the ten coupons were removed from Tank 14 as part of the Navy's destructive testing conducted in 2018. *Id.* at 338:25-339:12. He did not recall who took the field notes and testified that his memory of the coupons was different from that recorded in the contemporaneous field notes. The pictures taken of the coupons (*see, e.g.*, Exhibit N-040 at NAVY0009626) appear to show a wet back side with corrosion and the field notes document the same. Mr. Kern, however, testified that he did not recall the coupon as being wet. Hr'g Tr. Vol. II, Testimony of Frank Kern, 290:22-291:3. Based on the evidence presented, this testimony is found to not be credible.

139. Mr. Kern testified that the Navy does not rely on the calculated corrosion rate of 3 mils per year to operate the Red Hill facility. *Id.* at 297:5-15. The evidence shows, however, that this corrosion rate is used to set the targeted re-inspection interval for the tanks and, therefore, his testimony regarding the significance of this rate is not credible.

140. Mr. Kern testified that he could not estimate corrosion rates for known through holes given that he lacks sufficient information. *Id.* at 294:12-16. Mr. Jamond, however, was able to do a similar calculation for areas on Tank 14, simply assuming a constant rate of corrosion between the original construction of the tank in 1943 and coupon removal in 2018 (75 years) and thereby calculating a more conservative and more protective corrosion rate. Jamond Test. at NAVY0026777. Mr. Kern's testimony regarding the inability to make conservative estimate corrosion rates based on known failure instances is found to not be credible.

141. Mr. Kern indicated that he was not able to respond to a line of questioning related to cathodic protection at the Red Hill facility and that the questions should be directed to Mr. Jamond. Hr'g Tr. Vol. II, Testimony of Frank Kern, 290:22-291:8. Mr. Jamond stated that Mr. Kern was the appropriate expert in this area. *Id.* at 399:18-18. The Navy did not provide a credible witness for cathodic protection.

Mr. Robert Jamond

142. Robert Jamond testified that the Navy has conducted non-destructive examination (NDE) on every tank at the Red Hill Facility since 1990. Jamond Test. at NAVY0026761. However, the weight of the evidence demonstrates that many of the tanks have not undergone inspections in this timeframe.

143. Mr. Jamond offered testimony regarding the NDE evaluation scanning that was conducted. Jamond Test. at NAVY0026766. Under cross-examination, Mr. Jamond indicated that he was not involved in the scanning and that any questions related to the NDE scanning should be directed at Mr. Kern. Hr'g Tr. Vol. II, Testimony of Robert Jamond, 411:20-412:6. Mr. Jamond is found to not be an expert in this area and his testimony in this regard is therefore not given any weight.

Commander Darrel Frame

144. Commander Darrel Frame provided testimony related to the nature of historic releases from Red Hill. Testimony of Darrel Frame ("Frame Test.") at 8-9. He asserted that a number of these releases were due to the telltale system which was not properly designed; he claimed these releases were discharged into slop tanks in the lower access tunnel rather than into the environment. *Id.* There is no evidence in the record to support this conclusion and the

contemporaneous reports do not make any such assertion. Hr'g Tr. Vol. III, Testimony of Darrel Frame, 544:10-547:23. This testimony is found not to be credible.

145. Commander Frame also testified that the BWS agreed that releases from the telltale system should be discounted in any analysis about the number of releases at Red Hill. *Id.* at 548:5-6. This testimony is not supported by any evidence and was directly contradicted by testimony provided by Erwin Kawata from the BWS. Hr'g Tr. Vol. V, Testimony of Erwin Kawata, 990-992. Commander Frame further testified that the BWS agreed that "no rigorous study has to be done to quantify the risk an earthquake could cause to large nozzle tanks." This testimony was directly contradicted by Erwin Kawata and is not supported by any evidence in the record. *Id.* This testimony is found not to be credible.

146. Commander Frame testified that, despite descriptions in contemporaneous reports indicating that there were releases related to failed welds, he believed it is likely that failed welds might not hold air but that they could likely still hold fuel. Hr'g Tr. Vol. III, Testimony of Darrel Frame, Vol. III, 554-555. There is no evidence to support this assertion and it is contradicted by the evidence in the record, most notably the release of approximately 27,000 gallons from Tank 5 reported in January 2014. *Id.* at 540:9-542:24. This evidence is found to be not credible.

147. Commander Frame testified that he has no formal training in performing or evaluating risk and vulnerability assessments. Hr'g Tr. Vol. III, Testimony of Darrel Frame, at 570. Given this lack of training and expertise, Commander's Frame testimony regarding the meaning and import of the ABS risk assessment is not given weight. *See* Exhibit B-15 at BWS005019; *see also* Norfleet Expert Report at 50 (the QRVA report "was professionally executed using recognized risk assessment software").

148. Commander Frame also testified that he could not speak to all the conclusions in the ABS report because he has not studied it carefully; further, the model used was tremendously complex and was outside of his area of expertise. Hr'g Tr. Vol. III, Testimony of Darrel Frame, at 574. This further indicates that Commander's Frame testimony regarding the ABS analysis should not be given weight.

Mr. Curtis Stanley

149. Mr. Stanley is considered an expert in geology and hydrology, based on his education, training and experience. Testimony of Curtis Stanley ("Stanley Test.") at NAVY0026024 - NAVY0026025. He is not an expert in corrosion, metals, tank integrity, tank tightness testing and engineering risk assessment. Hr'g Tr. Vol. III, Testimony of Curtis Stanley, 672-673. Accordingly, his testimony related to these subject matters is not given any weight. Specifically, his testimony regarding the efficacy of the proposed AOC measures was based wholly on the testimony of others and is therefore not considered. *Id.* at 674.

150. Mr. Stanley testified that he was one of the primary authors of all the reports prepared under the AOC. Stanley Test. at NAVY0026028. However, under cross-examination, he clarified that he was only involved in the reports prepared under Section 6 and 7 of the AOC. Hr'g Tr. Vol. III, Testimony of Curtis Stanley, 675. These sections address the investigation and remediation of environmental conditions, groundwater modeling, and groundwater protection measures. *Id.* at 697. Accordingly, his testimony related to reports under the AOC's other sections is not given any weight in this proceeding.

151. Mr. Stanley's written testimony included a summary of the steps that the Navy has taken to address the lessons learned from the 2014 spill. Facility Environmental Report for Contested Case Hearing ("Stanley Expert Report") at NAVY0026057 -

NAVY0026058. This testimony was based solely on Navy reports written and validated by others. Hr'g Tr. Vol. III, Testimony of Curtis Stanley, 690. Accordingly, this testimony will be given no weight in this proceeding.

152. Mr. Stanley testified to the reliability of the groundwater modeling completed by the Navy. Stanley Test. at NAVY0026028, NAVY0026033; Stanley Expert Report at NAVY0026094, Sidebar 9; Supplemental Testimony of Curtis Stanley at 27-28. Mr. Stanley could not attest to whether the groundwater modeling complied with the ASTM Standards for Developing Groundwater Models. Hr'g Tr. Vol. III, Testimony of Curtis Stanley, 740-741. Mr. Stanley indicated that his colleague Dr. Panday may have considered this question, but he could not state whether Dr. Panday had found that the groundwater modeling complied with the applicable standard. It is concluded that there is no evidence in the record to support the conclusion that the groundwater model complies with industry standards.

153. With regard to the reports prepared under Section 6 and 7, including the groundwater conceptual site model, groundwater flow model, and geologic model, Mr. Stanley testified that it is critical to validate the data that is used to create the models. *Id.* at 676-677. He further testified that he had personally reviewed all such data and can attest to its accuracy and its validity. *Id.* at 677-679. Mr. Stanley also acknowledged that he has reviewed at least some of the shape files that were used to create the groundwater models. *Id.* at 771. In a declaration submitted in this proceeding, however, Mr. Stanley claimed that he had not "re-investigated, re-examined, or validated" the relevant data and "had no need to, and did not, rely on the modeling software files." Petitioner Honolulu Board of Water Supply's Motion to Strike the Testimony of Curtis Stanley, Declaration of Ella Foley Gannon ("Gannon Decl."), Ex. B. Given this contradictory evidence, Mr. Stanley's testimony will be given no probative value.

II. CONCLUSIONS OF LAW

A. The Navy's Red Hill Facility is Subject to Hawaii State Law

1. Federal facilities are required to comply with all federal, state, interstate, and local solid and hazardous waste requirements (including statutes, regulations, permits, reporting requirements, and administrative and judicial orders and injunctions). *See* 42 U.S.C. § 6991f(a).

2. The express waiver of sovereign immunity contained in the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 *et seq.*, subjects the Navy to the same substantive and procedural requirements as any person under state laws regulating USTs. *See* 42 U.S.C. § 6991f(a) ("The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or reasonable service charge).").

3. As such, the Navy's Red Hill facility is subject to federal law, as well as Hawaii State law, statutes, and regulations. The Navy must comply with H.R.S. and HAR.

B. Standing Requirements

4. The BWS has demonstrated an interest in the outcome of the Navy's permit application. *Mottl v. Miyahira*, 95 Haw. 381, 389 (2001) (requiring personal interest in outcome of controversy to establish standing); *see* Kawata Test. at ¶ 18 ("The basal aquifer beneath the RHBFSF is the groundwater resource from which the BWS provides drinking water to residents and visitors from Moanalua to Hawaii Kai."); Hr'g Tr. Vol. X, Testimony of Erwin Kawata, 974:6-10 ("the Board is extremely concerned about the Red Hill Facility, given the

quantity, the size of the tanks, the quantity of fuel present, and its location above a critical drinking water resource just a hundred feet away.").

5. The Sierra Club has also demonstrated an interest in the outcome of the Navy's permit application. *See* Hr'g Tr. Vol. IX, Testimony of Jodi Malinoski, 951:6-8 ("The Sierra Club and our members are very concerned about the, not just the drinking water, but the health of the groundwater as well.").

6. The BWS and the Sierra Club have interests that have either been injured or have interests that are likely to be threatened by continued operations at the Red Hill facility. *See Sierra Club v. Dep't of Transportation*, 115 Haw. 299, 329 (2007) (A threatened injury under the traditional injury-in-fact test may be shown based on direct personal interests in the site of a project coupled with concerns of actual injury should the project go forward without adequate environmental review).

C. The DOH Has a Public Trust Responsibility

7. The Hawaii Constitution guarantees that "[a]ll public natural resources are held in trust for the benefit of the people" and directs the State, and by extension the DOH, "to protect, control and regulate the use of Hawaii's water resources for the benefit of its people." *See* Haw. Const. art. XI, §§ 1 & 7. This public trust doctrine has been elevated to the level of a constitutional mandate in Hawaii. *In Re Water Use Permit Applications*, 94 Haw. 97, 131 (2000).

8. As a Hawaii state agency, the DOH has a constitutionally mandated public trust responsibility to "protect, control and regulate" Oahu's water for the "benefit of the people." Haw. Const. art. XI, §§ 1 & 7.

D. The Navy Has the Burden of Proof

9. The Navy's burden is not relieved or otherwise shifted as a result of this contested case. The parties opposing the issuance of a permit do not bear the burden of proving that a permit should not be granted. Rather, the party requesting the permit maintains its burden of proof notwithstanding a challenge to the issuance of the permit. *See, e.g., Matter of Conservation Dist. Use Application HA-3569*, 143 Haw. 379, 384 (2018) (permit applicant has burden of proof); *see also Mauna Kea Anaina Hou v. Bd. Of Land and Natural Res.*, 136 Haw. 376, 399 (2015) (accepting permit applicant's acknowledgement of its burden and requiring applicant to prove it met permit requirements).

10. The Navy bears the burden of proof as the party who is seeking a permit. As the party with the burden of proof, the Navy must "submit sufficient information to the satisfaction of the director that the technical, financial, and other requirements of this chapter are or can be met and the installation and operation of the UST or tank system will be done in a manner that is protective of human health and the environment." HAR § 11-280.1-323.

11. As a party opposing a permit where its issuance would jeopardize constitutional rights and public trust resources, the BWS and the Sierra Club have no burden of proof in this proceeding.

E. The Administrative Order of Consent Process

12. Before and throughout this contested case proceeding, the Navy has been undergoing an Administrative Order of Consent ("AOC") process related to a 2014 fuel release at Red Hill. The AOC process is a separate process from this permitting process and contested case proceeding.

13. Despite the processes being separate, many of the documents generated through the AOC process provide important background, data, and information related to Red Hill operations.

F. Permitting Process

14. H.R.S. § 342L-31(a) states that "No person shall install or operate an underground storage tank or tank system brought into use after the effective date of the tank or tank system standards established in section 342L-32 unless a permit is obtained from the department and upon payment of a fee."

15. HAR § 280.1-323(a) states that "No person shall install or operate an UST or tank system without first obtaining a permit from the director."

16. The DOH's UST regulations recognize that compliance with the requirements of Chapter 342L of the H.R.S. is a prerequisite for the issuance of a permit to operate. *See* HAR § 280.1-323(c).

17. The DOH's UST regulations are careful to limit the agency's authority to approve permit applications "only if the applicant has submitted sufficient information to the satisfaction of the director that the technical, financial, and other requirements of this chapter are or can be met and the installation and operation of the UST or tank system will be done in a manner that is protective of human health and the environment" and authorizes the DOH to impose conditions on a permit where "reasonably necessary to ensure compliance with this chapter and any other relevant state requirements, including conditions relating to equipment, work practice, or operation." HAR §§ 280.1-323(b), 280.1-328.

18. The regulations authorize the DOH to impose conditions on a permit where "reasonably necessary to ensure compliance with this chapter and any other relevant state

requirement, including conditions relating to equipment, work practice, or operation." HAR §§ 280.1-323(b), 280.1-328.

19. The Navy is subject to the DOH's UST regulations, including but not limited to its corrosion prevention rules, leak prevention and detection practices, and permitting requirements. The Navy is also subject to the HRS and the Hawaiian Constitution, particularly the Constitution's guarantee of a "clean and healthful environment."

20. The Navy must demonstrate that it can comply with all statutes and regulations in order to be granted a permit, and the DOH is permitted to impose conditions on a permit if necessary.

G. Releases

21. H.R.S. § 342L-32 states "(b) Underground storage tank and tank system standards shall include, but are not limited to the following specifications: (1) The tank and tank system shall be designed, constructed, installed, upgraded, maintained, repaired, and operated to prevent releases of the stored regulated substances for the operational life of the tank or tank system…"

22. H.R.S. § 342L-33 states that "The department, pursuant to chapter 91, shall adopt standards of performance for maintaining a release detection system, including, but not limited to, inventory control, tightness testing, and any other methods designed to identify releases from the underground storage tank or tank system in a manner consistent with the protection of human health and the environment."

23. Under H.R.S. § 342L-32 and § 342L-33, the Navy must construct and maintain its tank and tank systems "to prevent releases of the stored regulated substances for the operational life of the tank or tank system" and must "maintain[] a release detection system,

including, but not limited to, inventory control, tightness testing, and any other methods designed to identify releases from the underground storage tank or tank system in a manner consistent with the protection of human health and the environment."

24. The Red Hill Facility cannot prevent releases because, throughout its 80-year operation, the Facility has had episodic releases of fuel totaling approximately 175,000 gallons of product released, including a fuel release as recent as May 6, 2021. *See* DeNovio Test. at ¶ 9.b; DeNovio Expert Report at i, 3, 20-36, tbl. 1.1-1; Supp. DeNovio Test. at ¶ 8.

H. Corrosion

25. Under HAR § 11-280.1-20, "[e]ach tank must be properly designed, constructed, and installed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory…" Every UST, not just those in contact with the ground, is subject to this regulation. HAR § 11-280.1-20(b).

26. HAR § 11-280.1-20(b) delineates five different ways that tanks can be "protected from corrosion." First, tanks can be constructed of fiberglass-reinforced plastic. HAR § 11-280.1-20(b)(1). The Navy cannot comply with this requirement because the USTs are constructed of steel. Testimony of Blake Whittle, 11:1-2 ("The Red Hill Facility consists of 20 steel-lined tanks…").

27. Second, HAR § 11-280.1-20(b)(2) permits tanks to be constructed of steel and cathodically protected. Although the Red Hill USTs are constructed of steel, they are not cathodically protected per the regulations. Hr'g Tr. Vol. 1, Testimony of Danae Smith, 137:14-16 ("Our fuel constructed tanks that are steel encased in concrete don't have the cathodic protection on it.").

28. Third, HAR § 11-280.1-20(b)(3) permits tanks to be constructed of steel and clad or jacketed with a non-corrodible material. Although the Red Hill USTs are constructed of steel, they are not clad or jacketed with a non-corrodible material. *Compare* Hr'g Tr. Vol. 1, Testimony of Black Whittle, 66:3-67:11 (Navy witness Blake Whittle stating that the tanks are clad and jacketed with concrete) *with* Norfleet Expert Report at 64 (the Red Hill USTs "are not clad or jacketed systems" under applicable regulations and they "cannot be considered clad or jacketed as such terms are defined by or understood in industry practice"); *see also* Hr'g Tr. Vol. II, Testimony of Frank Kern, 306:18-19 ("…we all know that concrete cracks…"); *see also* Hr'g Tr. Vol. III, 535:2-9 (Navy witness Dr. Gaur Johnson acknowledging that "concrete cracks" and that "fuel could go through the cracks in the concrete" into the subsurface environment). The Red Hill USTs' concrete structural support has not prevented the USTs' steel liners from corroding.

29. Fourth, HAR § 11-280.1-20(b)(4) permits tanks to be constructed of metal without additional corrosion protection provided that the tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Although the Red Hill USTs are constructed of metal, the tanks are not installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life.

30. Fifth, HAR § 11-280.1-20(b)(5) allows compliance with the regulations if the "tank construction and corrosion protection are determined by the department to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than [HAR § 11-280.1-20(b)] (1) to (4)."

The Red Hill USTs' construction and corrosion protections have not been determined by the department to be designed to prevent the release or threatened release of any fuel.

31. The Navy has not demonstrated that its USTs are properly "protected from corrosion" per the HAR regulations and requirements.

I. Leak Detection

32. HAR § 11-280.1-41 requires UST systems with field-constructed tanks like those at Red Hill to be monitored for releases.

33. HAR § 11-280.1-33(a)(4) requires that owners and operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances, including the requirement that "[p]rior to the return to use of a repaired UST system, any repaired USTs must pass a tank tightness test in accordance with section 11-280.1-43(3)".

34. HAR § 11-280.1-43(3) requires that tank tightness testing "must be capable of detecting a 0.1 gph leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensations, and the location of the water table."

35. The Navy has not demonstrated that it can detect leaks occurring at 0.1 gph for repaired tanks under HAR § 11-280.1-43(3). *See* Hr'g Tr. Vol. 1, Testimony of Danae Smith, 140: 2-4 ("Q. So you can't meet that standard [0.1 gph leak detection]. A. We have not asked the test vendor to meet that standard, so I cannot confirm that.").

36. HAR § 11-280.1-43(10) requires an annual tank tightness test that can detect a 0.5 gph leak rate as a release detection method for field-constructed USTs. *See* HAR § 11-280.1-43(10)(A).

37. The Navy has not demonstrated that it can detect leaks occurring at 0.5 gph under HAR § 11-280.1-43(10(A). *See* Smith Test. at 9:13-10:2; Hr'g Tr. Vol. II, Testimony of Christopher Caputi, 230:7-12 (Navy witness Mr. Christopher Caputi testifying that the Navy relies upon a third party vendor to both assess the accuracy of and calibrate the equipment used to perform tank tightness testing on the Red Hill USTs).

J. Protective of Human Health and the Environment

38. The Hawaii Constitution, Article XI, § 1 provides that "[a]ll public natural resources are held in trust by the State for the benefit of the people."

39. The Hawaii Constitution, Article XI, § 9 provides that "[e]ach person has the right to a clean and healthful environment, as defined by laws relating to environmental quality."

40. The Supreme Court of Hawaii has stated that the right to a clean and healthful environment is defined by existing law relating to environmental quality." *In re Application of Maui Electric Company, Ltd.*, 141 Haw. 249, 261 (2017). The court went on to clarify that "[d]eveloping a body of case law defining the content of the right could involve confusion and inconsistencies. On the other hand, legislatures, county councils and administrative agencies can adopt, modify or repeal environmental laws or regulation laws in light of the latest scientific evidence and federal requirements and opportunities. Thus, the right can be reshaped and redefined through statute, ordinance and administrative rule-making procedures and not inflexibly fixed." *Id.*

41. This means that Hawaii statutes and the Hawaii DOH, or other related agencies, define a healthful environment as ensured by the Hawaii Constitution.

42. The State of Hawaii Environmental Policy states that it is the policy of the state to "conserve natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawaii." H.R.S. § 344-3.

43. H.R.S. § 344-4(2)(A) and (D) also outline state environmental policy, stating that it is state policy to "[e]ncourage management practices which conserve and fully utilize all natural resources" and "[e]ncourage management practices which conserve and protect watersheds and water sources, forest, and open space areas."

44. In order to uphold Hawaii constitutional requirements of public trust and a "clean and healthful environment," all Hawaii operators are subject to the H.R.S. and HAR related to environmental policy. The Navy is thus subject to H.R.S. § 344-3 and § 344-4, and any other relevant Hawaii state law, statutes, or regulations.

45. The Navy cannot fulfill its legal obligations to operate Red Hill in a manner that ensures a "clean and health environment" because it cannot safeguard Oahu's water from contamination. *See* DeNovio Test. at ¶ 9.b; DeNovio Expert Report at i, 3, 20-36, tbl. 1.1-1 (showing that numerous episodic releases from the Red Hill USTs have occurred and sampling from under and around Red Hill has demonstrated the existence of petroleum contamination in the very aquifer that sustains Oahu's water supply); *see also* Norfleet Test. at 8, app. C *and*

Supp. DeNovio Test. at ¶ 8 (showing that at least 73 fuel release incidents at Red Hill have been documented, including a reported a release of approximately 27,000 gallons of jet fuel from Tank 5 in January 2014 and a reported a release of approximately 1,000 gallons of jet fuel from supply piping in the lower access tunnel underneath the Red Hill USTs during the refilling of Tank 20 on May 6, 2021, totaling more than 175,000 gallons of product); Norfleet Expert Report at 27, fig. 10 (demonstrating that moisture trapped between the outside face of the Red Hill USTs' steel liner and concrete shell causes corrosion to form on the backside of the liner, and that corrosion progresses inward with time.).

III. RECOMMENDED DECISION

1. The DOH finds that the Navy cannot operate the Red Hill facility in accordance with State law. Further, the DOH finds that the Navy's Red Hill facility is not operated, and will not operate, in a manner that is protective of human health and the environment. The DOH cannot grant a permit to operate the Red Hill facility in the manner proposed by the Navy in its permit application for the following reasons:

a. The Navy cannot comply with the requirements of State law to prevent releases for the operational life of the USTs and UST system;

b. The Navy cannot comply with the requirements of State law to prevent corrosion of the USTs;

c. The Navy cannot comply with the requirements of State law to detect leaks at a rate of 0.1 gph for repaired USTs prior to returning them to service nor has it demonstrated that it can detect leaks at a rate of 0.5 gph for nonrepaired USTs (in accordance with annual leak detection rate requirements); and

d. The Navy cannot operate the Red Hill facility in a manner that is protective of the human health and the environment.

2. The Navy shall immediately commence planning to either construct new aboveground storage tanks in a location that does not overlie Oahu's sole-source aquifer or upgrade the Red Hill USTs with tank-within-a-tank secondary containment that provides for, at minimum, an interstitial space of sufficient width to enable the inspection, maintenance, testing, and physical repair of the exposed faces of the inner and outer barriers. The Navy shall apply for all applicable permits to relocate the Red Hill USTs or upgrade them with secondary containment within 18 months of this order or the Red Hill USTs shall be permanently closed in accordance with HAR § 11-280.1-71.

DATED: Honolulu, Hawaii, July 13, 2021.

DANA M.O. VIOLA
Corporation Counsel

By */s/ Jeff A. Lau*
JEFF A. LAU
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Board of Water Supply,
City and County of Honolulu

DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of UNITED STATES NAVY For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	DOCKET NO. 19-UST-EA-01 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing document was served upon the following, via email, to their last known email address on July 13, 2021:

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DANA M.O. VIOLA
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By */s/ Jeff A. Lau*
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DOCKET NO. 19-UST-EA-01, IN THE MATTER OF THE APPLICATION OF UNITED STATES NAVY FOR AN UNDERGROUND STORAGE TANK PERMIT FOR THE RED HILL BULK FUEL STORAGE FACILITY – PETITIONER HONOLULU BOARD OF WATER SUPPLY'S POST-HEARING MEMORANDUM; PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDED DECISION; CERTIFICATE OF SERVICE

EXHIBIT B

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DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of UNITED STATES NAVY For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	DOCKET NO. 19-UST-EA-01 PETITIONER HONOLULU BOARD OF WATER SUPPLY'S SUPPLEMENT TO MEMORANDUM IN SUPPORT OF THE ENVIRONMENTAL HEALTH ADMINISTRATION'S MOTION FOR THE REOPENING OF THE HEARING AND AMENDED MOTION; DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A THROUGH C; CERTIFICATE OF SERVICE

PETITIONER HONOLULU BOARD OF WATER SUPPLY'S SUPPLEMENT TO MEMORANDUM IN SUPPORT OF THE ENVIRONMENTAL HEALTH ADMINISTRATION'S MOTION FOR THE REOPENING OF THE HEARING AND AMENDED MOTION

The Honolulu Board of Water Supply ("BWS") hereby files this supplement to and amendment of its memorandum in support of the Environmental Health Administration ("EHA") of the Department of Health's ("DOH") motion to reopen these proceedings as well as the BWS' motion to reopen the record for additional purposes, to vacate Hearing's Officer Louis L.C. Chang's proposed decision and related deadlines, and for production of documents and witnesses from the United States Department of the Navy ("Navy"). *See* Declaration of Ella Foley Gannon ("Gannon Decl."), Exh. A (Pet'r BWS' Mem. and Mot. in Supp. of Envtl. Health Admin. Mot. for Remand to Hr'g Officer for the Reopening of the Hr'g (Nov. 17, 2021)) (hereinafter, the BWS' "Motion to Reopen"). The BWS supplements and amends its Motion to Reopen to make clear that it is seeking to reopen the evidentiary record to consider evidence and testimony concerning the facts and circumstances surrounding *any and all* known or suspected fuel releases that have occurred from any portion of the Red Hill Bulk Fuel Storage Facility ("Red Hill") infrastructure that were not disclosed by the Navy during this contested case or that otherwise occurred after the conclusion of the hearing.

That fuel release after fuel release from the Red Hill facility continues to occur – despite sworn Navy assurances to the contrary – should no longer be a surprise. Nevertheless, the BWS remains extremely disappointed and incredibly concerned by the seemingly endless flow of reported fuel release incidents at the Red Hill facility each passing day. The latest event, a release of a supposed 14,000 gallons of a mix of water and fuel in the Red Hill lower access tunnel, was reported by the Navy over the weekend on November 21, 2021. *See* Gannon Decl.,

Exh. B (Nov. 21, 2021 Navy Media Release). Both the sheer volume of the release and the fact that it reportedly came from the Navy's fire suppression system is deeply troubling. Moreover, as reported in a Honolulu Star Advertiser article published on November 23, 2021 (*see* Gannon Decl., Exh. C (Odor from Red Hill fuel release sparks 911 calls)), "[t]he smell of fuel around the neighborhoods of Foster Village and Aliamanu on Saturday night, near the site of a fuel spill from the Navy's Red Hill fuel facility, was strong enough that several residents called 911 and multiple units from the Honolulu Fire Department and Federal Fire Department responded." Like the rest of the mounting evidence that the Navy cannot prevent releases from the Red Hill facility and cannot operate the facility in a manner that is protective of human health and the environment as required by Hawaii law, the facts and circumstances surrounding this latest fuel release are unquestionably material to the issues to be decided in this proceeding and must be considered during this contested case.

For all the reasons described in its Motion to Reopen, the BWS respectfully requests that, in addition, the contested case hearing be reopened to supplement the record with evidence and testimony concerning the November 2021 fire suppression fuel release incident. The BWS further requests that Hearings Officer Chang compel the Navy to produce documents and make witnesses available for proper cross examination concerning the facts and circumstances surrounding this recently disclosed fuel release event.

DATED: Honolulu, Hawaii, November 23, 2021.

DANA M.O. VIOLA
Corporation Counsel

By */s/ Jeff A. Lau*

JEFF A. LAU
Deputy Corporation Counsel
Attorney for Petitioner
Board of Water Supply,
City and County of Honolulu

DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of	DOCKET NO. 19-UST-EA-01
UNITED STATES NAVY	DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A THROUGH C
For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	

DECLARATION OF ELLA FOLEY GANNON

I, ELLA FOLEY GANNON, declare as follows:

1. I am a partner with Morgan, Lewis & Bockius LLP representing Petitioner Honolulu Board of Water Supply ("BWS") in the above-entitled action. I am an attorney licensed to practice law before all State and Federal courts of the State of California and admitted to practice *pro hac vice* in this proceeding.

2. I make this Declaration in support of Petitioner BWS' Supplement to Memorandum in Support of the Environmental Health Administration's Motion for the Reopening of the Hearing and Amended Motion. I make this declaration based upon personal knowledge and I am competent to testify as to all matters stated herein.

3. Attached hereto as **Exhibit A** is a true and correct copy, with the exception of updated signature blocks, of Petitioner BWS' Memorandum in Support of the Environmental Health Administration's Motion for the Reopening of the Hearing and Motion (1) to Reopen the Record for Additional Purposes, (2) to Vacate the Hearings Officer's Proposed Decision and

Related Deadline for Filing Exceptions, and (3) for Production of Documents and Witnesses from the Navy, which was electronically filed and served on November 17, 2021.

4. Attached hereto as **Exhibit B** is a true and correct copy of a November 21, 2021 Media Release from the Navy entitled "Navy Responds to a Release from a Fire Suppression Drain Line at Red Hill."

5. Attached hereto as **Exhibit C** is a true and correct copy of a November 23, 2021 *Honolulu Star Advertiser* article entitled "Odor from Red Hill fuel release sparks 911 calls."

6. I declare under penalty of perjury that the foregoing facts are true and correct to the best of my knowledge and belief.

DATED: San Francisco, California, November 23, 2021.

ELLA FOLEY GANNON

Exhibit A

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DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of UNITED STATES NAVY For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	DOCKET NO. 19-UST-EA-01 PETITIONER HONOLULU BOARD OF WATER SUPPLY'S MEMORANDUM IN SUPPORT OF THE ENVIRONMENTAL HEALTH ADMINISTRATION'S MOTION FOR THE REOPENING OF THE HEARING AND MOTION (1) TO REOPEN THE RECORD FOR ADDITIONAL PURPOSES, (2) TO VACATE THE HEARINGS OFFICER'S PROPOSED DECISION AND RELATED DEADLINE FOR FILING EXCEPTIONS, AND (3) FOR PRODUCTION OF DOCUMENTS AND WITNESSES FROM THE NAVY; DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A THROUGH J; CERTIFICATE OF SERVICE

PETITIONER HONOLULU BOARD OF WATER SUPPLY'S MEMORANDUM IN SUPPORT OF THE ENVIRONMENTAL HEALTH ADMINISTRATION'S MOTION FOR THE REOPENING OF THE HEARING AND MOTION (1) TO REOPEN THE RECORD FOR ADDITIONAL PURPOSES, (2) TO VACATE THE HEARINGS OFFICER'S PROPOSED DECISION AND RELATED DEADLINE FOR FILING EXCEPTIONS, AND (3) FOR PRODUCTION OF DOCUMENTS AND WITNESSES FROM THE NAVY

The Honolulu Board of Water Supply ("BWS") hereby files this memorandum in support of the motion filed by the Environmental Health Administration ("EHA") of the Department of Health ("DOH") to reopen these proceedings and for duly appointed Hearing's Officer Louis L.C. Chang to conduct such further hearings and issue such further orders as may be necessary for the appropriate review and consideration of the contested case. Envtl. Health Admin. Mot. for Remand to Hr'g Officer for the Reopening of the Hr'g (Nov. 9, 2021) (hereinafter "EHA's Motion"). The BWS is beyond concerned that an officer of the United States Department of the Navy ("Navy") had to come forward in a personal capacity to inform the DOH that the Navy did not disclose the full extent of the Red Hill Bulk Fuel Storage Facility ("Red Hill") infrastructure, including pipelines, in its permit application and that information regarding the corrosion history at the Red Hill facility was improperly withheld during this very proceeding. EHA's Motion at 3. Like the EHA, the BWS recognizes that the facts and circumstances implicated by the EHA's Motion must be considered during this contested case.

But the EHA's Motion does not go far enough as we have learned about a number of other events that are material to these proceedings and troubling regarding both the Navy's behavior and its ability to operate the Red Hill facility safely. The BWS was surprised and disappointed by the recent news media reporting of yet another fuel release into the environment from the Hotel Pier pipelines at the Red Hill facility that began in or about March 2020. The

BWS was even more shocked to learn from this reporting that the Navy not only knew about the release before the public hearings held in this proceeding took place but may have deliberately concealed this information from Hearings Officer Chang, the parties, and the public. This astonishment was only compounded by the revelations leading up to and during the October 28, 2021 Fuel Tank Advisory Committee[1] meeting that, among other things, another corrosion-induced fuel release occurred from the Kilo Pier pipelines at Red Hill, the DOH has levied a hefty fine upon the Navy for violating Hawaii underground storage tank ("UST") laws as they pertain to the Red Hill facility, and the Navy detected petroleum constituents in its own drinking water supply in 2020 and August 2021 as well as in the monitoring wells in the vicinity of Red Hill in September and October 2021. Since then, even more alarming information has come to light, including additional news media reporting that a "pressure surge" like the one that caused the May 6, 2021 release of approximately 1,600 gallons of jet fuel from supply piping in the lower access tunnel occurred at another Red Hill pipeline on September 29, 2021 and that the Navy shut down the Red Hill facility for nine days without informing the DOH.

As disturbing as all this new information is, it is equally troubling that the Director of the DOH has been poised to render a decision on whether to grant or deny the Navy's application for a permit to operate the Red Hill facility with relevant evidence missing and key witness testimony incomplete. The facts and circumstances surrounding these latest developments and possible Navy cover ups are unquestionably relevant to, and absolutely critical for, resolution of this contested case. They constitute vital evidence bearing upon the Navy's inability to operate

[1] In the aftermath of the Tank 5 fuel release from Red Hill, the Hawaii legislature amended state UST laws to establish a Fuel Tank Advisory Committee. *See* H.R.S. § 342L-61. The purpose of the Fuel Tank Advisory Committee is to study issues related to leaks from field-constructed USTs, including those at the Red Hill facility. *See* H.R.S. § 342L-62.

the Red Hill facility in accordance with Hawaii law, including applicable release prevention requirements. Moreover, they lend additional credence to the concerns raised by the BWS in its post-hearing briefing that the Navy and its witnesses presented testimony in this proceeding that was neither accurate nor credible. This new evidence must come to light now, must be subject to full and fair scrutiny by the parties, and must be considered before a final permit decision is issued.

The BWS hereby respectfully joins the EHA's Motion to reopen the contested case hearing and, in addition, moves Hearings Officer Chang to issue an order: (1) reopening the record to supplement it with evidence and testimony concerning the facts and circumstances surrounding the full extent of the UST system infrastructure at the Red Hill facility, the corrosion history at the Red Hill facility, the May 6, 2021 fuel release from supply piping in the lower access tunnel tanks during the refilling of Tank 20, the previously undisclosed fuel releases from the Hotel Pier and Kilo Pier pipelines at the Red Hill facility, the pressure surge incident that occurred at a Red Hill pipeline on or about September 29, 2021, the notice of violation issued to the Navy on October 26, 2021, the detection of petroleum constituents in drinking water and monitoring wells in the vicinity of Red Hill in 2020 and 2021, and information about any other known or suspected fuel releases that have occurred from any portion of the Red Hill facility that were not disclosed during the contested case hearing, as well as to resubmit a proposed decision and order, findings of fact, and conclusions of law that considers the additional evidence and testimony received; (2) vacating the Hearings Officer's Red Hill UST Permit Application Proposed Decision & Order, Findings of Fact and Conclusions of law, dated September 10, 2021 (the "Proposed Decision") and vacating the current deadline of December 20, 2021 for filing of exceptions to the Proposed Decision; and (3) ordering the Navy to produce documents and make

witnesses available for proper cross examination concerning the facts and circumstances surrounding this recently-disclosed information. Without reopening the contested case record, the BWS cannot meaningfully protect its substantial interest in safeguarding the irreplaceable sole-source groundwater aquifer that nourishes Oahu's drinking water supply, nor can Hearings Officer Chang propose to the Director of Health a fully informed decision on the merits of the Navy's permit application. This Motion should be granted.

I. RELEVANT BACKGROUND

At the conclusion of this contested case, the Director of Health must decide whether to grant or deny the Navy's application for a permit to operate the Red Hill facility. Hawaii law governing UST operations expressly requires that UST systems "shall be designed, constructed, installed, upgraded, maintained, repaired, and operated to prevent releases of the stored regulated substances for the operational life of the tank or tank system …." H.R.S. § 342L-32(b)(1). Under the DOH's UST rules, the Navy's permit application can be approved "only if the applicant has submitted sufficient information to the satisfaction of the director that the technical, financial, and other requirements of this chapter are or can be met and the installation and operation of the UST or tank system will be done in a manner that is protective of human health and the environment." HAR § 280.1-323(b). The Navy's permit application covers the entire Red Hill facility, not just its USTs. Indeed, the Navy itself recognized that Red Hill pipelines are part of its permit application. *See* Testimony of CDR Blake Whittle, 14 ("The Red Hill Facility includes the 20 fuel storage tanks, as well as the pipes, control room, tunnels, pumphouse, upper tank farm, Hickam product recovery tanks, Hickam airfield piping and hydrant pits, piers, and four surge tanks.").

An initial contested case hearing took place from February 1 through 5, 2021, with closing arguments being offered on February 8, 2021. Following the close of the initial hearing, there was another release of fuel into the environment from the Red Hill facility reported by the news media. *See* Declaration of Ella Foley Gannon ("Gannon Decl."), Exh. A (Another leak prompts new calls to shut down Navy's massive Red Hill storage facility). The contested case was reopened to allow for additional information and testimony related to that pipeline release. *See* Scheduling Order No. 6 (Revised) (May 19, 2021). The long history of fuel releases into the environment from the Red Hill facility was discussed at length during this proceeding. For example, Navy witness Commander Darrel Frame submitted written testimony and was cross-examined specifically concerning the fuel release history of the Red Hill facility. *See generally* Testimony of CDR Darrel Frame ("Frame Test."), 8-9; *see also* Hr'g Tr., Vol. III, 538-651. The parties expended significant time and resources to developing, to the extent possible given the incomplete nature of Navy recordkeeping and reporting, a fulsome history of the fuel releases from the Red Hill facility. Even after the initial public hearing concluded, Hearings Officer Chang asked the parties for "assistance with regard to developing [an] accurate and complete picture of the history of fuel releases at [Red Hill]." *See* Gannon Decl., Exh. B (Feb. 16, 2021 email from L. Chang Re: Leak History information). The Proposed Decision devotes at least twenty-seven pages to discussing the Red Hill fuel release history (*see* Proposed Decision at 19-23; 27-33; 54-60; 65-66; 80; 93-97), yet, due to the Navy's incomplete and inaccurate testimony, it nonetheless underrepresents the total number of fuel releases, the total volume of fuel released, the types of fuel releases, and the considerable risks posed by the Red Hill facility to Oahu's irreplaceable drinking water resources.

Before, during, and after the contested case hearing, the Navy had numerous opportunities to provide a complete and accurate history of the fuel releases from the Red Hill facility yet failed to do so. As reported in a Honolulu Civil Beat article published on October 8, 2021 (*see* Gannon Decl., Exh. C (Amid 'Political Concerns,' Navy Kept Quiet About Red Hill Pipeline Leaking Into Pearl Harbor)), days before the public hearings in this proceeding were to take place in February 2021 to determine whether the Navy could safely operate the Red Hill facility to prevent releases, the Navy was aware of a disturbing fact—a Red Hill pipeline covered by its permit application failed two leak detection tests and was likely responsible for a growing oil sheen in the waters of Pearl Harbor. *Id.* In a troubling turn of events, the Navy not only waited months to report the results of the failed tests to the DOH but also failed to disclose this highly relevant and material information during the contested case. *Id.* The Navy's reported reason for withholding this information is equally concerning. According to the news outlet, which stated that its reporting was based on copies of emails and other documents obtained from a Navy employee who shared information on the condition of anonymity for fear of retaliation, one Navy officer wrote regarding the pipeline release and the failed tests that "[t]here are significant political concerns if this were to become an 'active' leak…. Activist organizations will use this to advance their anti-Red Hill narrative … at a sensitive time as the contested case hearing begins and the legislative season starts." *Id.* Instead of promptly reporting the release and disclosing this information during the contested case hearing, the Navy "waited months to report it to the [DOH] amid concerns it would hamper its ability to secure a state permit." *Id.* The Hawaii Congressional delegation has taken notice, calling for the Department of Defense Inspector General to initiate an independent investigation to determine whether Navy officials

properly investigated and notified the DOH of this fuel release. *See* Gannon Decl., Exh. D (Nov. 3, 2021 letter from M. Hirono, B. Schatz, E. Case, and K. Kahele to S. O'Donnell).

Equally important events that speak directly to the ultimate issues in this proceeding have occurred since the completion of the evidentiary portion of the contested case hearing. First, the Navy issued a press release and report stating that operator error was the cause of the "pressure surge" on May 6, 2021 that resulted in the release of approximately 1,600 gallons of jet fuel from supply piping in the lower access tunnel tanks during the refilling of Tank 20.[2] *See* Gannon Decl., Exh. E (Oct. 26, 2021 Navy Media Advisory). However, as reported in a Honolulu Star Advertiser article published on November 10, 2021 (*see* Gannon Decl., Exh. F (Top Navy official raised concerns about multiple leaking valves at Red Hill, according to leaked email)), "what Navy officials didn't tell the media, or state regulators, was that just weeks prior, on Sept. 29, they had detected another pressure surge in a pipeline similar to the one that caused the May fuel leak, and they were so concerned that they shut down Red Hill operations for nine days while they investigated." *Id*. A Navy officer reportedly believed there could be multiple valves throughout Red Hill's pipeline system that were leaking. *Id*. According to the newspaper, prior to the publishing of the story the DOH was not aware of the September 29, 2021 pipeline surge or that operations had been suspended at the Red HFill facility while the Navy investigated. *Id*.

[2] That the Navy would blame operator error for a pipeline fuel release is disturbing because it contradicts Navy witness testimony indicating that the Navy has a pipeline monitoring system that provides a real time remote integrity check of the pipelines, that alarms are triggered by issues with pipeline pressure, and that operations cease to investigate any fuel release. *See* Floyd Test., 25-26. The Navy's excuse also flies in the face of assurances it gave that the Red Hill facility now has sufficient layers of protection in place to prevent future human errors from resulting in fuel releases. *See* Stanley Test., Facility Environmental Report for Contested Case Hearing No. 19-UST-EA-01, 4 (attributing the Tank 5 fuel release to "human error" and claiming that the Navy had implemented new standard operating procedures and other measures "to ensure that these types of errors and a release similar to what occurred in 2014 will not occur again").

Then, on October 26, 2021, the DOH issued the Navy a Notice of Violation and Order finding several violations of Hawaii law during a compliance inspection conducted from September 28, 2020 through October 8, 2020 and ordering the Navy to pay a $325,182 fine. *See* Gannon Decl., Exh. G (NOVO No. 21-UST-EA-01). Among other things, the DOH determined that the Navy violated Hawaii UST rules by failing to provide corrosion protection in violation of HAR Section 11-280.1-31(1), failing to perform leak detection testing on three active pipelines in violation of HAR Section 11-280.1-33(a)(5), failing to perform leak detection testing on three active pipelines in violation of HAR Section 11-280.1-33(a)(5), failing to perform leak detection testing on spill prevention equipment in violation of HAR Section 11-280.1-35(a)(1), failing to perform monthly inspections of hydrant pits in violation of HAR Section 11-280.1-36(a)(4), and failing to utilize any form of release detection for two USTs in violation of HAR Section 11-280.1-41(a)(2)(A). *See id.*

At the October 28, 2021 Fuel Tank Advisory Committee meeting even more disturbing information was brought to light. A representative for the Navy informed the Committee and the public that a corrosion-induced hole in a pipeline lead to a fuel release at the Red Hill facility's Kilo Pier on July 16, 2021. *See* Gannon Decl., ¶ 4.[3] A DOH representative also informed the Committee and the public that total petroleum hydrocarbons (TPH) were detected in the Navy's water supply, Red Hill Shaft, in an amount which exceeded the DOH's environmental action levels ("EALs"). *See id.* Data recently posted publicly by the Navy and the DOH indicates that TPH were detected in Red Hill Shaft as high as 490 micrograms per liter (µg/L) in 2020 and in

[3] As evidenced by Scheduling Order No. 6, fuel releases into the environment that occurred after the close of the contested case hearing are critical to this proceeding. *See* Scheduling Order No. 6 (Revised) (May 19, 2021) (reopening the hearing and requesting that the parties supplement the record with information concerning the May 6, 2021 fuel release).

Red Hill Shaft as high as 540 µg/L and in Red Hill Monitoring Wells 16 and 19 as high as 380 µg/L in fall 2021. *See* Gannon Decl., Exhs. H (2021 Annual Water Quality Report Joint Base Pearl Harbor-Hickam Water System), I (Excerpts from Red Hill Bulk Fuel Storage Facility Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021).

During the contested case hearing in February 2021, Navy witnesses were repeatedly asked—by Hearings Officer Chang, by the BWS, and by the Sierra Club—to identify and address any recent fuel releases from the Red Hill, the deteriorating infrastructure at the aging Red Hill facility, the full extent of the Navy's compliance history, and the detections of petroleum contamination in the wells around Red Hill. Instead of offering complete and accurate testimony, the Navy testified as follows:

- Navy witness Mr. John Floyd testified in writing that the 2020 DOH Red Hill compliance inspection "resulted in no major findings," that "no fuel leaks or visible staining of fuel was found at any of the operational Red Hill storage tanks, surge tanks, above ground storage tanks, Hickam fuel storage tanks, hydrants or any of the pipelines," and that the inspectors "reported the infrastructure was clean and pristine with no fuel leaks." *See* Testimony of John Floyd ("Floyd Test."), 45. During cross-examination Mr. Floyd further testified that "there was no evidence of any fuel leaks during – active fuel leaks during the 2020 [DOH] inspection." Hr'g Tr., Vol. I, 183:13-15.

- Navy witness Ms. Danae Smith testified that the last leak she was aware of at Red Hill took place in 2014. *Id.* at 131:3-7.

- Navy witness Commander Darrel Frame testified in writing that "[d]ocuments the Navy produced in this proceeding identify the known unscheduled fuel movements (UFMs) since the facility began operating in 1942." Frame Test. at 8 (footnote omitted). This testimony made no reference to any pipeline releases. When examined by Navy counsel during the contested case hearing on February 3, 2021, Commander Frame testified that there were no corrections necessary to his written testimony. *See* Hr'g Tr., Vol. III, 539:4-8. Commander Frame also testified that other than the Tank 5 release in 2014, he was "reasonably confident" that since 1988 there have been no fuel releases from the Red Hill facility. *Id.* at 640:2-9.

- Navy witness Mr. Curtis Stanley testified in writing that "[t]here is no evidence of fuel constituents near the Navy's supply well or at any of the 16 'perimeter wells' (i.e., wells other than the 3 located near the tanks)" and these wells have not been impacted by operations at the Red Hill facility over the last 80 years. Testimony of Curtis Stanley ("Stanley Test."), 9 (citation omitted). Mr. Stanley also testified that the Navy's drinking water at Red Hill Shaft "has never had any contaminant detected at concentrations above the regulatory screening levels, which were designed by DOH to be categorically protective of human health and the environment." *Id*., Facility Environmental Report for Contested Case Hearing No. 19-UST-EA-01 ("FER"), 13.

Nowhere in either written or live testimony does a single Navy witness acknowledge the recent Red Hill pipeline releases. Nor do any Navy witnesses provide credible testimony about corrosion-induced failures, regulatory noncompliance, or petroleum contamination detections. Despite offering hundreds of pages of written testimony and providing live testimony over multiple days, Navy witness after Navy witness either said nothing about these issues, or worse, downplayed them. It is telling that much of this new information is known now not on account of Navy self-reporting; instead, the news of yet more and more problems at the Red Hill facility has been reported by the media, which apparently has obtained Navy documents and emails from a whistleblower. The Honolulu Civil Beat and Honolulu Star Advertiser articles appear to be well sourced, and the events described therein demand further investigation, as do the events reported to the Fuel Tank Advisory Committee.

II. ARGUMENT[4]

The Red Hill contested case must be reopened. In addition to the information that has recently come to light and was not considered in the proceeding, there are several open and

[4] The BWS has made a good faith effort to resolve the dispute underlying this Motion and has been unable to do so. On October 8, 2020, the very day the Honolulu Civil Beat article was published, counsel for the BWS emailed counsel for the Navy to address the need for reopening of the record in the contested case and production of additional documents and witnesses. *See* Gannon Decl. at Exh. J (Oct. 8, 2021 email from E. Foley Gannon RE: Availability for a Call). On October 13, 2021, counsel for the BWS participated in a meet-and-confer conference call with counsel for the Navy but was unable to resolve these issues notwithstanding good faith efforts to facilitate a

factually material questions that the Navy must clarify in order to ensure a full and fair record. Without a reopened hearing and without new documents, the exact timeline of events, the precise location of the pipeline fuel releases, the type and quantity of fuel released, the mechanism by which fuel was released into the environment, the Navy's response to and reporting of the releases, and other important details will be left unresolved and remain hidden. Similar information is also needed about the 2020 and 2021 detections of petroleum constituents in drinking water and monitoring wells, the September 29, 2021 pressure surge incident, and the October 26, 2021 notice of violation. Additionally, Hearings Officer Chang must admit this evidence into the record in order for the Director to be able to consider it when she makes her decision. *See* H.R.S. § 91-9(g) ("No matters outside the record shall be considered by the agency in making its decision …."). To that end, the Navy must be ordered to produce new documents regarding these incidents, the Navy's efforts to investigate and otherwise respond to these incidents, the Navy's communications with the DOH and its contractors regarding these incidents, the reporting of these incidents (or lack thereof), and the Navy's efforts to conceal these incidents (if any); the Navy must be ordered to make witnesses available for cross-examination under oath as to those same subjects. Further the Navy needs to present a witness who is competent to testify under oath that there have been no other known or suspected fuel releases. Without this evidence and testimony, neither Hearings Officer Chang nor the Director will have all the relevant information upon which to make a decision on the Navy's permit application.

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resolution through this dialogue. *See id.*, ¶ 3. Counsel for the Navy confirmed in during a November 16, 2021 meet-and-confer conference call that the Navy intended to oppose the other parties' efforts to reopen the contested case. *See id.*

A. Hawaii Law Authorizes Review of Additional Evidence Following the Issuance of a Proposed Decision

Hearings Officer Chang has the authority and the duty to reopen the contested case hearing. Under Hawaii UST law, the Director may delegate her powers and authorities as she deems "reasonable and proper for the effective administration of" the state's UST program. H.R.S. § 342L-2; *see also* HAR § 11-24(a) ("The director … may appoint a representative to be the hearings officer. The hearings officer shall conduct the hearing and any related pre-hearing and post-hearing activities as may be required or appropriate."). The Director has ordered Hearings Officer Chang "to consider and decide whether the matter should be reopened to take further testimony in the contested case hearing." Order Staying Deadline for Submission of Exceptions and Remanding the Matter to the Hr'g Officer, 2 (Nov. 12, 2021). This is entirely consistent with Hawaii law, which empowers a hearings officer to "[a]dmit, receive, and exclude evidence" (HAR § 11-24(b)(10)) and dictates that the DOH should consider material evidence that is offered after a proceeding when there is good reason that it was not presented earlier. Once a state agency issues a final ruling following a contested case, that ruling can be appealed to a circuit court. *See* H.R.S. § 91-14(a). During that process, a party to the appeal can petition the circuit court "to present additional evidence material to the issue in the case" to the agency at issue. H.R.S. § 91-14(e). If the "additional evidence is material and [] there were good reasons for failure to present it in the proceeding before the agency," the court may order that the agency take the additional evidence under consideration. *Id*. With the new evidence "[t]he agency may modify its findings, decision, and order by reason of the additional evidence and shall file with the reviewing court, to become part of the record, the additional evidence, together with any modifications or new findings or decision." *Id*.; *see also Flores v. Bd. of Land and Nat. Res.*,

143 Haw. 114, 119-120, 424 P.3d 469 (2018) (recognizing that a court can order an agency to consider new evidence if the new evidence is "material" and if it "could not have been presented to [the agency] … because the fact did not exist at the time.").

Here, the evidence regarding the accurate scope of the Red Hill facility, the corrosion history at the Red Hill facility, the recent Red Hill facility pipeline releases and surge events, the DOH citing the Navy for violating Hawaii UST laws, and the detections of petroleum constituents in drinking water and monitoring wells are unquestionably material to the contested case and, due to the Navy's conduct, not known to the BWS until a just days ago. The Red Hill facility fuel release history is itself critical, as the risk of future chronic or catastrophic fuel releases is a paramount reason this contested case hearing was necessary. The long history of fuel releases into the environment from the Red Hill facility cannot be denied. Nor can the fact that more and more recent fuel releases and their impacts are being uncovered with each passing month and it is the press, not the Navy, that is often reporting these events. Instead, the Navy has repeatedly testified that the only release to the environment in recent years was the 2014 release. *See, e.g.*, Hr'g Tr., Vol. I, 183:13-15 (Navy witness Mr. John Floyd testifying that there was "no evidence" of any "active fuel leaks" during a 2020 DOH facility inspection); Frame Test. at 8 (Navy witness Commander Darrel Frame testifying that "[d]ocuments the Navy produced in this proceeding identify the known unscheduled fuel movements (UFMs) since the facility began operating in 1942") (footnote omitted); Hr'g Tr., Vol. III, 640:2-9 (Navy witness Commander Darrel Frame testifying that, other than the Tank 5 release in 2014, he was "reasonably confident" that since 1988 there have been no fuel releases from the Red Hill facility). The Navy has also inaccurately testified about its compliance inspections and the impacts to critical drinking water resources from operations at the Red Hill facility. *See, e.g.*,

Floyd Test. at 45 (Navy witness Mr. John Floyd testifying that the 2020 DOH Red Hill compliance inspection "resulted in no major findings"); Stanley Test. at 9, FER at 13 (Navy witness Mr. Curtis Stanley testifying that there have "never" been any contaminants detected at Red Hill Shaft above DOH's EALs and there is "no evidence" of fuel constituents near Red Hill Shaft or at any of the monitoring wells outside of the tank farm). We now have reason to question these representations and without reopening the record the Director may never know the truth.

As a result of the Navy's incomplete and inaccurate testimony, the Proposed Decision presents certain of these false representations as support for an initial recommendation to the Director that the Navy be issued a permit to operate the Red Hill facility with minimal conditions. Hearings Officer Chang should not propose, and the Director should not make, a final decision without consideration of this new evidence, particularly where it calls into question the completeness of the evidentiary record, the veracity of Navy witness testimony, and the very foundation for the initially proposed findings. The materiality of this evidence cannot be reasonably questioned. Finally, and as explained above, this information was not known to the BWS at the time of the contested case hearing, and thus the BWS was unable to assess this evidence or meaningfully cross-examine Navy witnesses at that time. The BWS was unaware that there was an active leak from a pipeline at Hotel Pier at the Red Hill facility because the Navy apparently hid this fact from the parties and Hearings Officer Chang. The BWS likewise could not know that there would be a corrosion-induced release from another pipeline at Kilo Pier, that there would be a pressure surge incident at yet another Red Hill pipeline, or that the Navy would be issued a notice of violation from the very inspection the Navy represented had resulted in no major findings. And although the BWS warned of the risk, it did not know of the

most recent petroleum contamination detected in the Navy's drinking water and nearby monitoring wells. If this evidence had been known at the time, the BWS would have presented it, as it was critical—if not dispositive—to the outcome of the case. Accordingly, the record must be robustly supplemented, adversarially tested, and fully evaluated before a final permitting decision is made.

B. Contested Case Hearings Must be Fair and Must be Conducted on an Accurate Factual Record

The Hawaii Supreme Court demands that contested case hearings provide "a high level of procedural fairness and protections to ensure that decisions are made on the factual record that is developed through a rigorous adversarial process." *Mauna Kea Anaina Hou v. Bd. of Land and Nat. Res.*, 136 Haw. 376, 380, 363 P.3d 224 (2015). To that point, contested case hearings are "designed to ensure that the record is fully developed and subjected to adversarial testing before a decision is made." *Id.* at 391. Further, "[t]he manner in which the justice system operates must be fair and must also appear to be fair … and must have the appearance of justice." *Id.* at 389. Indeed, Hawaii law holds that during the contested case hearing process, "[o]pportunities shall be afforded all parties to present evidence and argument on all issues involved." HRS § 91-9(c); *see also In re Application of the Hawaii Electric Light Company, Inc.*, 67 Haw. 425, 690 P.2d 274 (1984).

By ignoring the recent fuel releases, the possible cover up, the Navy's violations of Hawaii law, and the impacts to drinking water and our sole-source aquifer, the DOH would be abdicating its duty to ensure fairness and develop a full and fair evidentiary record. Without further evidence and testimony addressing these issues, any contested case decision would be effectively arbitrary and inconsistent with the DOH's public trust responsibility to protect Oahu's

water resources. Further, an accurate record would surely include these highly relevant pipeline fuel release incidents, just as it included the May 2021 pipeline fuel release incident. Throughout this proceeding, the parties and Hearings Officer Chang acknowledged that the Red Hill facility release history was material. Finally, as explained above, if this contested case hearing is unfair—for example, if the DOH were to ignore these developments—a court could later order the DOH to consider them. Notably, there are no procedural hurdles to reopen the proceeding for this critical purpose. Instead, the laws and regulations which govern contested case hearings attempt to ensure that ultimate decision makers possess relevant and accurate information when making his or her decision. This proceeding must be fair, and the Director needs relevant, accurate, and material information to make her decision.

C. Proposed, Targeted Document Requests

Hawaii law empowers Hearings Officer Chang with the ability to ensure that that the parties to this proceeding have access to a complete record. Indeed, contested case hearing procedures are "designed to ensure that the record is fully developed and subjected to adversarial testing before a decision is made." *Mauna Kea Anaina Hou v. Bd. of Land and Nat. Res.*, 136 Haw. 376, 391 (2015) (emphasis omitted). To that effect, a hearings officer may "[f]or good cause shown, upon motion … order a party to produce non-privileged evidence, and may draw inferences against the party if the evidence is not produced without good cause being shown." HAR § 11-1-24(b)(5). A hearings officer may also "[i]ssue subpoenas for people, documents, and things as authorized by law." HAR § 11-1-24(b)(4). Accordingly, the BWS respectfully requests that Hearings Officer Chang exercise his power to compel the Navy to produce complete, unredacted versions of the following documents:

1. **All documents and communications relating to any and all known or suspected fuel release incidents from the Red Hill facility that were not otherwise produced in this proceeding.**

2. **All documents and communications relating to the Hotel Pier pipeline release that began on or about March 2020 and lasted until approximately July 2021, including, without limitation, the Navy's pipeline leak detection tests and its efforts to investigate and/or respond to the release, the Navy's communications with the DOH and its contractors regarding the release, the reporting of the release (or lack thereof), and the Navy's efforts to conceal the release (if any).**

3. **All documents and communications relating to the corrosion-induced Kilo Pier pipeline release, including, without limitation, the Navy's pipeline leak detection tests and its efforts to investigate and/or respond to the release, the Navy's communications with the DOH and its contractors regarding the release, the reporting of the release (or lack thereof), and the Navy's efforts to conceal the release (if any).**

4. **All documents and communications relating to the pressure surge incidents that occurred at Red Hill pipelines on or about May 6, 2021 and September 29, 2021, including, without limitation, the Navy's pipeline leak detection tests and its efforts to investigate and/or respond to the incidents, the Navy's communications with the DOH and its contractors regarding the incidents, the reporting of the incidents (or lack thereof), and the Navy's efforts to conceal the incidents (if any).**

5. **All documents and communications relating to the DOH underground storage tank and Airport Hydrant Systems compliance inspection was conducted from September 28, 2020 to October 8, 2020 referenced in the Testimony of John Floyd dated November 30, 2020 and the subject of the Notice of Violation and Order (NOVO No. 21-UST-EA-01) issued to the Navy by the DOH on October 26, 2021.**

6. **All documents and communications relating to the detections of petroleum constituents in Red Hill Shaft or Red Hill monitoring wells identified or reported since the closing of the contested case since May 27, 2021.**

To the extent that there are any documents, or portions thereof, which the Navy claims are exempt from disclosure and seeks to withhold, the BWS further requests that Hearings Officer Chang order the Navy to provide a *Vaughn* index so that the parties can consider whether to seek an adverse inference in accordance with Hawaii Administrative Rules Section 11-1-24(b)(5).

Good cause exists to order the Navy to produce critical evidence. Hawaii courts do not apply one definition of "good cause" because standards governing whether good cause exists

"depend not only upon the circumstances of the individual case, but also upon the specific court rule at issue." *Chen v. Mah*, 146 Haw. 157, 178, 457 P.3d 796 (2020). As applied in the context of the production of case-critical evidence, however, the Hawaii Supreme Court has stated that "a liberal construction of good cause is preferable" and has often looked to the federal definition as interpreted by the courts under the Federal Rules of Civil Procedure. *Iwamoto v. Hirata*, 49 Haw. 514, 515, 422 P.2d 99 (1966) (looking to federal courts for guidance on "good cause"); *see also Davis v. Wholesale Motors, Inc.*, 86 Haw. 405, 424, 949 P.2d 1026 (Haw. Ct. App. 1997) (discussing good cause in context of request to allow third party to testify).

Courts have generally held that good cause has been established where one party is in possession of information, essential to the opposing party's case, that is otherwise unavailable to that party. *See Williams v. Cont'l Oil Co*., 215 F.2d 4, 7 (10th Cir. 1954) ("In each case the question is whether special circumstances make it essential to the preparation of the moving party's case that the desired information be made available to him."); *Cetron Elec. Corp*., 207 Ct. Cl. 985, 988 (1975) ("If relevant, genuinely needed, and not otherwise available, there is good cause for production of documents for trial preparation."); *Leven v. Birrell*, 13 F.R.D. 341, 342 (S.D.N.Y. 1952) (holding that information, in possession of defendant, but which was required to "enable plaintiff to prepare his case and to facilitate proof and progress at the trial," constituted sufficient good cause to order production); *In re SWEPI L.P.*, 103 S.W.3d 578, 584 (Tex. App. 2003) ("Generally, 'good cause' for a discovery order is shown where the movant establishes: (1) the discovery sought is relevant and material, that is, the information will in some way aid the movant in the preparation or defense of the case; and (2) the substantial equivalent of the material cannot be obtained through other means.").

Here, it is irrefutable that the information requested is critical to the issues at stake in this proceeding. Good cause exists to order the Navy to produce the limited set of documents implicated by the recent news media reporting on the undisclosed pipeline fuel releases and surge events, the notice of violation issued to the Navy, and the detection of petroleum constituents in Navy drinking water and monitoring wells. As discussed above, the Navy cannot reasonably argue that the information requested is not relevant and material to the issues at stake in this proceeding. It is also clear that the Navy is the only party to this proceeding that controls the evidence in question. Ultimately, the Director needs to be able to make findings and come to conclusions as to whether the Navy has demonstrated that it can operate the Red Hill USTs in compliance with Hawaii law. She cannot do so without this evidence.

III. CONCLUSION

The BWS has consistently endeavored to have this contested case hearing decided expeditiously on the basis of sound science and reasoned legal analysis. However, the BWS recognizes the compelling reasons to reopen the evidentiary portion of the contested case hearing based on the information that has recently come to light. The record in this proceeding must be supplemented. The Navy must be ordered to produce documents and make witnesses available for proper cross examination concerning the facts and circumstances surrounding these events. Only through such an order can the evidentiary record be made whole, and the Director fully informed of all material facts related to the Navy's permit application.

DATED: Honolulu, Hawaii, November 17, 2021.

DANA M.O. VIOLA
Corporation Counsel

By */s/ Jeff A. Lau*
JEFF A. LAU
Deputy Corporation Counsel
Attorney for Petitioner
Board of Water Supply,
City and County of Honolulu

DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of	DOCKET NO. 19-UST-EA-01
UNITED STATES NAVY	DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A-J
For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	

DECLARATION OF ELLA FOLEY GANNON

I, ELLA FOLEY GANNON, declare as follows:

1. I am a partner with Morgan, Lewis & Bockius LLP representing Petitioner Honolulu Board of Water Supply ("BWS") in the above-entitled action. I am an attorney licensed to practice law before all State and Federal courts of the State of California and admitted to practice *pro hac vice* in this proceeding.

2. I make this Declaration in support of Petitioner BWS' Memorandum in Support of the Environmental Health Administration's Motion for the Reopening of the Hearing and Motion (1) to Reopen the Record for Additional Purposes, (2) to Vacate the Hearings Officer's Proposed Decision and Related Deadline for Filing Exceptions, and (3) for Production of Documents and Witnesses from the Navy. I make this declaration based upon personal knowledge and I am competent to testify as to all matters stated herein.

3. On October 13, 2021, I participated in a meet-and-confer conference call with counsel for the Navy. The purpose of this meeting was to make a good faith effort to resolve the

underlying dispute of this Motion. On November 16, 2021, I participated in a meet-and-confer conference call with counsel for the Navy and the Environmental Health Administration. During that meeting the Navy confirmed that it intended to oppose the other parties' efforts to reopen the contested case. Despite our efforts, we were unable to resolve these issues prior to filing this Motion.

4. On October 28, 2021, I attended the online meeting of the Fuel Tank Advisory Committee. At the meeting, a representative for the United States Navy ("Navy") stated that "on July 16, 2021 a release of 76 marine diesel into the harbor from Kilo Pier was identified…. The source of the hole in the pipe was caused by corrosion." Additionally, at the same meeting, a representative for the Hawaii Department of Health stated that "on October 19, 2021, the Navy provided the DOH preliminary data indicating that total petroleum hydrocarbons … was detected in their prelamination sample from the Red Hill Shaft and two samples during the month of August 2021 that exceeded the department's environmental action level." A video of this meeting is available at the following hyperlink: https://youtu.be/2OECvnseijk.

5. Attached hereto as **Exhibit A** is a true and correct copy of a May 7, 2021 *Hawaii Public Radio* article entitled "Another leak prompts new calls to shut down Navy's massive Red Hill storage facility."

6. Attached hereto as **Exhibit B** is a true and correct copy of a February 16, 2021 email Hearings Officer Louis L.C. Chang sent to all parties to this proceeding in which Hearings Officer Change requested the parties' "assistance with regard to developing as accurate and complete picture of the history of fuel releases at the RHUSTF."

7. Attached hereto as **Exhibit C** is a true and correct copy of an October 8, 2021 *Honolulu Civil Beat* article entitled "Amid 'Political Concerns' Navy kept Quiet About Red Hill

Pipeline Leaking into Pearl Harbor."

8. Attached hereto as **Exhibit D** is a true and correct copy of a November 3, 2021 letter from U.S. Senator Brian Schatz, U.S. Senator Mazie K. Hirono, U.S. Representative Ed Case, and U.S. Representative Kaiali'i Kahele to the Acting Inspector General of the Department of Defense, Mr. Sean O'Donnell, "calling for calling for the Department of Defense Inspector General to initiate an independent investigation to determine whether Navy officials involved in the operation and oversight of the Red Hill Bulk Fuel Storage Facility (hereinafter 'Red Hill') in Honolulu, Hawaii, properly investigated and executed notification of a fuel leak to state health officials, and specifically whether the Navy delayed investigation or notification out of concern it might influence its ability to secure an extension of Red Hill's state operating permit."

9. Attached hereto as **Exhibit E** is a true and correct copy of an October 26, 2021 Media Advisory from the Navy entitled "U.S. Navy Identifies Operator Error as Cause of May 6 Fuel Release at Red Hill."

10. Attached hereto as **Exhibit F** is a true and correct copy of a November 10, 2021 *Honolulu Star Advertiser* article entitled "Top Navy official raised concerns about multiple leaking valves at Red Hill, according to leaked email."

11. Attached hereto as **Exhibit G** is a true and correct copy of an October 26, 2021 Notice of Violation issued to the Navy by the Hawaii Department of Health (NOVO No. 21-UST-EA-01).

12. Attached hereto as **Exhibit H** is a true and correct copy of Naval Facilities Engineering Systems Command's 2021 Annual Water Quality Report: Joint Base Pearl Harbor-Hickam Water System, which "reflects monitoring data collected up to Dec. 31, 2020."

13. Attached hereto as **Exhibit I** is a true and correct copy of excerpts of a document

entitled “Red Hill Bulk Storage Facility Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021” posted on the Hawaii Department of Health website under the heading “UPDATE: May 6, 2021 Release Monitoring Data.” This document is available at the following hyperlink: https://health.hawaii.gov/shwb/files/2021/11/Red-Hill-Notice-of-Interest-Sampling-Results-10-May-21-4-Nov-21-GW_new-sampling-plan_reviseddisclaimerfinal.pdf.

14. Attached hereto as **Exhibit J** is a true and correct copy of an October 8, 2021 email from myself to counsel for the Navy regarding their availability to discuss the need to reopen the record in the contested case hearing and the production of additional documents and witnesses.

15. I declare under penalty of perjury that the foregoing facts are true and correct to the best of my knowledge and belief.

DATED: San Francisco, California, November 17, 2021.

ELLA FOLEY GANNON

EXHIBIT A

Another leak prompts new calls to shut down Navy's massive Red Hill fuel storage facility

By Casey Lund

Updated: May. 7, 2021 at 10:54 PM PDT

HONOLULU, Hawaii (HawaiiNewsNow) - The US Navy is continuing to monitor its massive Red Hill fuel storage facility following a leak of about 1,000 gallons of jet fuel on Thursday night.

In a news release Friday, the Navy said the leak was from a distribution pipeline and that a containment system "properly monitored, detected and collected the fuel release as designed."

"Our containment system functioned as designed to keep the fuel contained within our facility, with no indication that fuel was released to the environment," said Capt. Gordie Meyer, commanding officer of Naval Facilities Engineering Command Hawaii.

"We are conducting an extensive investigation to determine the cause of the release and will continue to examine our systems and procedures."

The WWII-era Red Hill facility sits above the Pearl Harbor aquifer, which supplies drinking water to most of Honolulu.

And the latest leak has rekindled fears of environmentalists.

"We're very concerned because the tanks are antiquated," said David Frankel, attorney for the Sierra Club. "They're leaky and they sit above the sole source aquifer for the island."

"There's been spills after spills, contamination events after contamination event, burning open pits and so the Navy has been not a good neighbor," said Carroll Cox of EnviroWatch Inc.

The state Department of Health's Environmental Management Division says they were notified of the leak Friday morning.

They were told 700 gallons of fuel was recovered during the cleanup.

They said they don't know if any reached the aquifer.

"The groundwater aquifer is approximately 100 feet below the tanks so it'll be a while before the fuel would have reached it," said Joanna Seto, of the division.

Seto said the storage facility is currently being cleaned by the Navy so it will take some days until state inspectors will be able to get in to do their own investigation.

Leaks at Red Hill have been happening for years and some worry the situation is growing more urgent.

In 2014, there was a release of more than 27,000 gallons of fuel from the facility. Tests of the monitoring wells surrounding the tanks showed a spike in levels of hydrocarbons in soil vapor and groundwater, but test results from the drinking water there confirmed it was still within safe levels.

In October of last year, the Navy proposed adding a new lining inside the tanks or remove them by 2045. That was seven years later than a previous agreement.

The state Department of Health and the Environmental Protection Agency rejected that plan.

There is currently a contested case against the Navy's plan for the tanks.

Eventually, Hawaii Department of Health Director Dr. Libby Char will have the final say on whether or not the Navy receives a permit.

The Sierra Club and the city's Board of Water Supply, who are both pushing for the full removal of the tanks, could appeal to the state Circuit Court.

Frankel said a decision may still take several months.

US Sen. Mazie Hirono said she is also monitoring the situation.

In the wake of the incident, she said Navy leadership pledged to "review the notification process to ensure all appropriate parties are promptly informed" if a fuel spill happens again.

"This incident reaffirms the need for clear and transparent information to be communicated in a timely manner," she said, in a statement.

EXHIBIT B

From: louchang@hula.net <louchang@hula.net>
Sent: Tuesday, February 16, 2021 7:36 PM
To: 'David Kimo Frankel' <davidkimofrankel@hawaiiantel.net>; Brown, David K. <david.brown@morganlewis.com>; Gannon, Ella Foley <ella.gannon@morganlewis.com>; 'Fitzpatrick, David CIV USN (USA)' <david.fitzpatrick2@navy.mil>; ''Lau, Jeff A'' <jlau3@honolulu.gov>; 'Law, Michael B CIV USN (USA)' <michael.b.law@navy.mil>; ''Luka, Jean'' <Jean.Luka@doh.hawaii.gov>; marnier+NLO@gmail.com; 'Mckay, Jonathan C CIV USN COMNAVREG SW SAN CA (USA)' <jonathan.c.mckay@navy.mil>; 'Minott, Karrin H CIV USN OGC WASH DC (USA)' <karrin.minott@navy.mil>; ''Paige, James C'' <james.c.paige@hawaii.gov>; 'Riddle, Marnie E CIV USN OGC WASH DC (USA)' <marnie.riddle@navy.mil>; ''Steven Jacobson'' <steven.jacobson@doh.hawaii.gov>
Subject: Leak History information

[EXTERNAL EMAIL]
Dear Advocates:
I hope that you are all somewhat rested following our intensive week of hearings. I am writing to request your assistance with regard to developing as accurate and complete picture of the history of fuel releases at the RHUSTF. In closing arguments, there were discussions discussing the following:

1. 30 of 72 releases were attributable to failures associated with the telltale system. The telltale system was disengaged in the year ____;
2. 23 releases are associated with tank number one. Tank number one was placed out of service in and since the year____;
3. With regard to Dr. DeNovio's "bubble chart", 19 red – lines reflect events of fuel releases with no reported volume information and 21 bubbles reflect releases of identified quantities of fuel. The chart reflects information only for these 40 events.

I would appreciate your assistance and request that you identify for me the exhibits and pertinent witness reports concerning the history of unintended fuel releases, the types and quantities of released fuel or reflecting the review of such records by testifying witnesses. To the extent there is the identification of the cause or causes of the fuel release events it would be helpful to identify and distinguish between releases attributable to operator error, leaks through the tank steel liner, leaks from nozzles or other identified parts of the fuel distribution center system or facilities that comprise the RHUSTF.

Thank you for any information you can provide on this topic. You can provide this information in advance of or as part of your proposed findings of fact.

Lou

Hearing Officer

Mediation Arbitration Neutral Services LouChang ALC
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National Academy of Arbitrators
Mediation & Arbitration Panel Member:
AAA, DPR, FMCS, HLRB
LouChang.com

EXHIBIT C

Reference: https://www.civilbeat.org/2021/10/amid-political-concerns-navy-kept-quiet-about-red-hill-pipeline-leaking-into-pearl-harbor/

Honolulu

Amid 'Political Concerns,' Navy Kept Quiet About Red Hill Pipeline Leaking Into Pearl Harbor

As the health department held hearings on whether the Navy could operate its Red Hill fuel facility safely, fuel from a Red Hill pipeline was leaking into Pearl Harbor.

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By Christina Jedra / About 6 hours ago

Reading time: 11 minutes.

It was the end of January, just days before the U.S. Navy was set to appear in a hearing before the Hawaii Department of Health that would determine the fate of its Red Hill underground fuel facility.

A particularly inconvenient time for a leak.

And yet, an oil sheen in the water of Pearl Harbor had been growing since March 2020, and a nearby pipeline connected to the Red Hill facility had just failed a leak detection test.

In a Jan. 21 email, a Navy captain said he was worried about the optics.

So-called "historical" releases, such as from fuel-soaked soil near Pearl Harbor, were one thing. But an active leak from an in-use pipeline would reflect poorly on the Navy at a crucial moment.

"There are significant political concerns if this were to become an 'active' leak," he wrote. "Activist organizations will use this to advance their anti-Red Hill narrative ... at a sensitive time as the contested case hearing begins and (the) legislative season starts."

Cory Lum/Civil Beat

Tour boats pass Hotel Pier daily. In March 2020, a pipeline leaked oil into the water near the pier.

Copies of emails and other documents were obtained by Civil Beat from a Navy employee who shared information on the condition of anonymity for fear of retaliation.

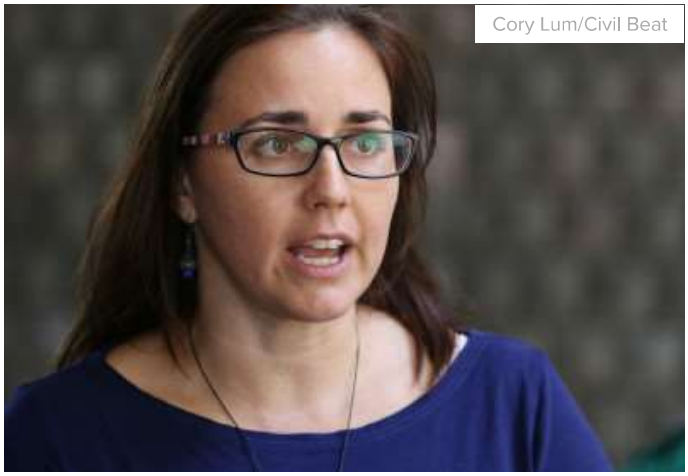
The records show that the Navy had enough evidence to conclude the leak was active as early as January according to state Department of Health standards, but officials waited months to report it to the department amid concerns it would hamper its ability to secure a state permit.

The Navy applied for the permit in 2019 seeking the state of Hawaii’s permission to continue operating its Red Hill fuel facility for another five years. The Sierra Club of Hawaii and the Honolulu Board of Water Supply, which believe the facility poses a threat to Oahu’s drinking water supply, contested the permit.

A contested case hearing ran from Feb. 1 through 6. Even though the pipeline that was leaking into Pearl Harbor is part of the Red Hill fuel facility and falls under its permit application, Navy officials never mentioned it.

By July, the Navy had recovered 7,700 gallons of fuel from the environment around Hotel Pier, near the Pearl Harbor Visitor Center.

“It’s an outrage. It makes my blood boil,” said Marti Townsend, the Sierra Club’s executive director.



Sierra Club Director Marti Townsend said the Navy's lack of transparency means "we really can't trust them."

"That they can't be forthcoming with the public and the Department of Health about active leaks means that we really can't trust them when it comes to making the most protective decision possible about the Red Hill fuel tanks. Their judgment is faulty."

Navy spokesman Mike Andrews said in written responses to questions that the Navy was still investigating the source of the leak at the time of the contested case hearing. The Navy did not confirm the source of the problem until July, he said.

Asked about Navy officials' concerns about how an active leak might influence the contested case hearing, Andrews did not respond. Instead, he said the Navy has taken "all necessary steps to remediate this release."

"This demonstrates the Navy's commitment to stewardship and protecting the environment, while ensuring there is no risk to base residents and to the public," he said.

Military officials have known about the leak since March 17, 2020, the Navy acknowledged to Hawaii Public Radio earlier this year. And the Navy reported it to DOH that day, Andrews said.

"At the time the release was reported, investigators thought that the release was from a historical plume located near the Hotel Pier site, and not from a leak in an active pipeline," he said.

After 22 days, the release seemed to stop on its own but it resumed on June 2, Andrews said. The Navy reported it again to DOH.

In a December 2020 letter, the department required the Navy to locate and secure the oil release, remediate the spill and conduct additional pipeline testing.

In January, two leak detection tests yielded troubling results. On Jan. 20, a defuel line, used to collect fuel from other lines when they heat up, failed its test. Officials added some hardware to try to ensure the pipeline was airtight, according to the report, but on Jan. 23, the pipeline failed again.


Cory Lum/Civil Beat/2021

The leak occurred right across the harbor from the USS Arizona.

The Department of Health would later state that two failed tests and an obvious oil sheen are sufficient evidence to confirm fuel was leaking from the Red Hill facility's pipeline. But it wasn't enough for the military, emails show.

In a Jan. 28 email, a Navy captain asserted that "no leak has been confirmed" and that a more advanced leak confirmation test would be done to "validate/invalidate the results on the 'defuel' line." However, it was ultimately determined that subsequent testing could not occur because of conditions in the soil and water, Andrews said.

On Feb. 2, an oil spill cleanup company, which the Navy would later hire, conducted a site visit. The contractor, David "DC" Carter, a senior response manager for Pacific Environmental Corporation, or PENCO, almost immediately determined the leak was active, an email shows.

"Mr. DC Carter was firm in his belief that there is an active leak mixing with and pushing the older product out," John Floyd, the deputy director of fuel and facility management at Naval Supply Systems Command, wrote after PENCO visited the site.

Carter did not respond to a request for comment. PENCO's $2 million contract with the Navy included a nondisclosure clause that requires the contractor to refer all media requests to the military.

Despite the failed tests, the oil sheen and Carter's assessment, the Navy still would not acknowledge that the Red Hill pipeline was the source of the leak.

The Navy used orange oil booms like those pictured to contain the spill at Hotel Pier.

On Feb. 3, Navy Commander Darrel Frame, the director of the Red Hill program for Naval Facilities Engineering Command Hawaii, testified under oath that – with the exception of a well-known 2014 release – fuel from the Red Hill facility had not contaminated the environment at any time since 1988.

“So generally, except for the 2014 event, are you proposing to state that there have been no releases of fuel that have gotten into the environment, again, other than perhaps the 2014 Tank 5 event?” Hearing Officer Lou Chang asked, according to the transcript.

“You know, sir, after looking at this pretty carefully, I’m reasonably confident saying that,” Frame said. “Not to say there couldn’t be some different interpretations, but those are my interpretations, yes, sir.”

As contested case hearings were happening, “a relatively significant amount” of fuel was being released into Pearl Harbor’s water every day, according to a Feb. 4 email a Navy captain wrote to colleagues. That Navy official, too, was concerned about how the release might impact the Red Hill permit.

“This release into the harbor is not only an environmental concern but also a concern as it relates to the Red Hill fuel system,” he wrote.

The entire fuel system Joint Base Pearl Harbor Hickam relies on – the Red Hill tanks and the pipelines that connect them to Pearl Harbor – are all under a Hawaii Department of Health operating permit, he said.

"We do not want the issues at the harbor to be conflated with the Red Hill tanks and strategic fuel storage," he said.

The Department of Health didn't find out about the failed test results until May 18, according to a letter the DOH wrote to Rear Admiral Timothy Kott – more than three months after the contested case hearing had concluded.

"The pressure test failures combined with the existing evidence of a release to surface waters is confirmation that a release from the Red Hill Bulk Fuel Storage Facility has occurred," wrote Keith Kawaoka, DOH's deputy director for environmental health.

In the letter, Kawaoka reminded Kott that the Navy is responsible for complying with state regulations and must notify DOH within seven days of a "confirmed release."

Kawaoka retired earlier this year, DOH said. He declined to comment for this story.

It was only after Kawaoka's June 30 letter that the Navy determined the source of the leak was the defuel line at Hotel Pier.

"Through a methodical approach (coordinated with DOH), in early summer 2021 it was determined that the source of the active release was both the historical plume and the defuel line," Andrews said.

Courtesy of U.S. Navy

Rear Admiral Timothy Kott, commander of Navy Region Hawaii, received a letter from the Department of Health at the end of June stating that pipeline failures and oil sheens confirmed a release from the Red Hill facility.

Much of the criticism about Red Hill has been focused on the World War II-era tanks themselves, which are located in the main facility located near the Halawa prison. The 20 tanks, each with a 12.5 million-gallon capacity, are made up of a quarter-inch thick steel liner encased in concrete that sit 100 feet above Oahu's drinking water aquifer. These liners have been corroding.

In 2014, 27,000 gallons of fuel leaked from a tank. The Navy blamed the incident on human error by a contractor.

In May, Hawaii News Now reported approximately 1,000 gallons spewed from a distribution pipe at the same underground facility. The contested case hearing was reopened on July 7 to

address the details of that spill.

However, concerns about the facility's appendages, the system of pipelines that allow the force of gravity to deliver fuel to Pearl Harbor, have received relatively little attention until recently.

At Rep. Ed Case's request, a provision was added to the National Defense Authorization Act to require the Navy to adhere to "significantly enhanced" inspection standards for the pipelines attached to its Red Hill fueling facility.

The bill was passed by the U.S. House last month. Case did not respond to a request for comment.


Cory Lum/Civil Beat

Hawaii Health Department Director Libby Char will decide whether to issue the Navy a permit.

Whether the Navy will be allowed to continue operating the entire Red Hill facility – tanks, pipes and all – is an open question.

The Navy, Sierra Club and the Board of Water Supply are required to submit their final materials to the Department of Health by Oct. 20. In the weeks following, the parties will present their final oral arguments to the Department of Health, Townsend said.

In a statement, the Board of Water Supply declined to make an official available for an interview, citing the "ongoing nature of the contested case proceeding."

Last month, Chang, the hearing officer, recommended issuing the Navy a permit for continued operations at Red Hill if it can meet certain inspection and repair requirements for its underground fuel tanks.

Townsend said it's wrong that Chang wasn't able to take the March 2020 leak into account and factor it into his recommendation to DOH Director Libby Char.

In the end, the decision on whether to issue the permit lies with Char.

"We obviously need to have a full investigation, and the parties will get an opportunity to make the case to the director both in writing and in oral arguments," Townsend said.

"Evidence like this speaks to the unreliability of the Red Hill fuel facility and the unreliability, honestly, of the Navy officials who are managing it. And that speaks to the need for the Department of Health and the EPA to be much stronger and protective of the public's health."

Timeline: Red Hill Pipeline Leak Into Pearl Harbor

March 2020

A leak at Pearl Harbor Hotel Pier is discovered. Navy reports it to DOH.

June 2020

The leak at Pearl Harbor Hotel Pier, which had stopped, starts again. Navy reports again to DOH.

Dec. 2020

Dec. 21: DOH tells the Navy to "locate and secure the oil release, remediate the oil spill, and conduct additional pipeline testing."

January 2021

Jan. 20: A defuel line that leads to the Hotel Pier area fails a leak detection test.

Jan. 21: A Navy commander voices concerns via email about "political" implications of an active leak.

Jan. 23: The defuel line fails a second leak detection test.

February 2021

Feb. 1: Contested case hearing begins

Feb. 2: During a site visit, a Navy contractor says he believes the leak is active.

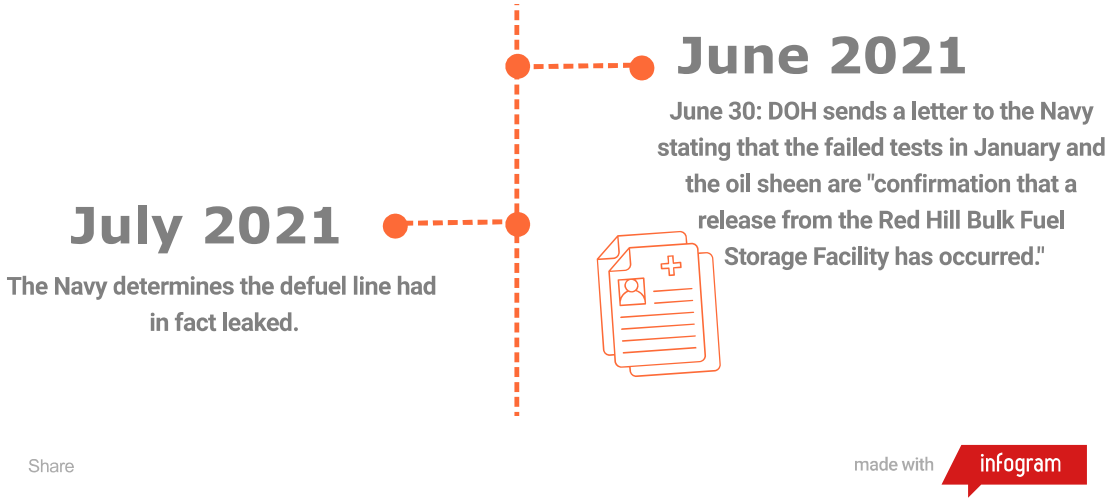
Feb. 3: Commander Darrel Frame denies knowledge of fuel from the Red Hill facility contaminating the environment, with the exception of a well-known 2014 spill.

Feb.4: A Navy commander emails colleagues to say "a relatively significant amount" of fuel is being released into Pearl Harbor's water every day.

Feb. 5: Contested case hearing concludes.

May 2021

May 18: DOH learns of the two failed pipeline tests in January.



Timeline: Red Hill Pipeline Leak Into Pearl Harbor
Infogram

About the Author

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Use the RSS feed to subscribe to Christina Jedra's posts today

EXHIBIT D

Congress of the United States
Washington, DC 20510

November 3, 2021

Mr. Sean O'Donnell
Acting Inspector General
Department of Defense
4800 Mark Center Drive,
Alexandria, VA 22350-1500

Dear Mr. O'Donnell:

We write today calling for the Department of Defense Inspector General to initiate an independent investigation to determine whether Navy officials involved in the operation and oversight of the Red Hill Bulk Fuel Storage Facility (hereinafter "Red Hill") in Honolulu, Hawaii, properly investigated and executed notification of a fuel leak to state health officials, and specifically whether the Navy delayed investigation or notification out of concern it might influence its ability to secure an extension of Red Hill's state operating permit.

Two recently published Hawaii news articles[1] reference emails purportedly received from a Navy employee contending that officials had enough evidence as early as January 2021 to conclude fuel leaking into Pearl Harbor was coming from an active pipeline connected to Red Hill (and not from a historical plume as originally thought by the Navy in March 2020). The emails allege that officials waited months to report it to the Hawaii Department of Health amid concerns it would hamper the ability to secure a state operating permit. The articles quote two separate Navy Region Hawaii spokespersons who dispute key facts reported in both articles, including that the Navy withheld information that may have been material to state regulators concerning the extension of Red Hill's operation permit. Given the gravity of these allegations and the Navy's dispute of them, an independent inquiry is necessary to ensure integrity and public trust in how the Navy is operating and conducting oversight of Red Hill.

Therefore, we are requesting you convene an independent investigation to inquire into the facts concerning the following allegations made against the Navy:

1) Whether Navy officials, in the weeks leading up to the Red Hill operating permit hearing with the Department of Health held the first week in February 2021, covered up evidence or intentionally delayed concluding the leak into Pearl Harbor, first observed by the Navy in

[1] https://www.civilbeat.org/2021/10/amid-political-concerns-navy-kept-quiet-about-red-hill-pipeline-leaking-into-pearl-harbor/; https://www.staradvertiser.com/2021/10/20/hawaii-news/lawmakers-seek-answers-about-navys-handling-of-pearl-harbor-fuel-leak/

March 2020, was coming from an active pipeline and not a historical plume in order to avoid jeopardizing the approval of Red Hill's operating permit;
2) Whether Navy officials were deficient or somehow negligent in January 2021 or sooner in failing to conclude the leak was coming from an active pipeline and not a historical plume, given the information they had, which included the oil sheen first observed in Pearl Harbor in March 2020, subsequent remediation efforts that recovered 7,100 gallons of fuel, and two failed leak detection tests in January 2021;
3) Whether the leaking pipeline is connected to and therefore considered a part of the Red Hill facility;
4) Whether the Navy complied with all of its fuel leak/release reporting requirements related to this matter, including whether or not the Navy had an obligation to disclose this leak to the Hawaii Department of Health hearing officer during the February 2021 operating permit hearing and whether the Navy failed to timely disclose the two failed leak detection tests in January 2021 to the Department of Health and/or the Red Hill operating permit hearing officer;
5) Whether any officials intentionally misled the Department of Health, including the operating permit hearing officer, during the Red Hill operating permit approval process;
6) Whether all of the fuel has been cleaned up and the affected area remediated;
7) Whether the Navy was fined for the leak or subject to any other enforcement action; and
8) Any other matters the Inspector General deems relevant or pertinent regarding this matter

We recognize the strategic importance of Red Hill to our national security and expect that the facility is operated safely and in accordance with all federal and state environmental laws and regulations. The facts raised by several Hawaii news outlets in recent weeks are extremely troubling, and the Navy's disputes regarding several of the allegations warrant an independent investigation to restore the community's trust in how the Navy operates Red Hill. We anticipate that you will ensure an independent, fact-based inquiry is undertaken into this matter, and if any wrongdoing is uncovered, that appropriate action will subsequently hold those responsible accountable. Thank you for your consideration of this request.

Sincerely,

MAZIE K. HIRONO
U.S. Senator

BRIAN SCHATZ
U.S. Senator

ED CASE
U.S. Representative

KAIALI'I KAHELE
U.S. Representative

EXHIBIT E

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October 26, 2021
Release # 21-08

U.S. Navy Identifies Operator Error as Cause of May 6 Fuel Release at Red Hill

New practices and safety steps already implemented

HONOLULU, HI – A U.S. Navy investigation determined that operator error caused the release of 1,618 gallons of jet fuel (JP-5) from a pipeline inside the Red Hill Bulk Fuel Storage Facility (RHBFSF) on May 6. The release was not from the fuel tanks. The Navy recovered all but 38 gallons of fuel and has already implemented new procedures, many within days of the incident.

The Navy reviewed inventory records to determine the amount of fuel released and subsequently recovered. The fuel containment system at the RHBFSF performed as it was designed. It properly monitored and detected the fuel release, and collected the majority of the fuel.

In the days following the release, all system operators met to reinforce safety and operational procedures, and safeguard measures have been added, including the requirement for more system operators in the control room during all fuel transfer evolutions.

“I am taking corrective action to improve safety in all aspects of Red Hill operations,” said Capt. Bert Hornyak, commanding officer, Naval Supply Systems Command Fleet Logistics Center (FLC) Pearl Harbor. “Our team showed a quick and professional response to contain most of the release, and we are just as focused on and committed to keeping this from happening again.”

Hornyak’s team has already completed an internal review of personnel training and procedures.

The investigation, conducted by the Naval Petroleum Office of the Naval Supply Systems Command, determined that an operator failed to follow specific procedures to close valves in the fuel lines during fuel transfer operations. This failure caused a pressure surge within the system, which blew out an expansion coupling; fuel was released from the pipeline as a result. There was no damage to the Red Hill underground storage tanks, and all tanks passed follow-on tank tightness tests conducted after the fuel release from the pipeline. Repairs to the impacted section of the pipeline are scheduled to be completed by June 2022.

-more-

There is no impact to operations.

The investigation also identified contributing factors: butterfly valves were used as isolation valves; the set point for the out-of-balance alarm in the Automated Fuel Handling Equipment (AFHE) system was too high to identify the fuel movement; the AFHE equipment failed to indicate a pressure drop in the pipeline; and expansion couplings were used in sections affected by maintenance projects. FLC and Naval Facilities Engineering Systems Command are addressing these issues.

The Navy has provided copies of the investigation to the Hawaii Department of Health (DOH) and the Environmental Protection Agency (EPA), who regulate the facility. Redacted copies of documents associated with this investigation are posted to the Red Hill website.

The Navy remains committed to environmental stewardship and continues to work closely with federal and state agencies, including the Hawaii DOH and the EPA under an Administrative Order on Consent (AOC), to protect human health, the environment and Oahu's drinking water.

Red Hill provides the Department of Defense ready access to fuel for needed mission readiness. It is part of the nation's critical infrastructure – vital to national security, safety and defense. Red Hill is also a vital fuel source for Hawaii during disasters and emergencies. Red Hill could supply gravity-fed fuel to the Daniel K. Inouye International Airport, Honolulu Harbor, Hawaiian Electric, and responding ships and aircraft. Hawaii's isolation makes us dependent on shipping and air transport. The fuel from Red Hill helps ensure those transit lanes are secure.

For more information about Red Hill Bulk Fuel Storage Facility, please visit the Navy's website: www.cnic.navy.mil/redhill.

-USN-

EXHIBIT F

Star Advertiser

Monday, November 15, 2021 | Today's Paper | 81°

HAWAII NEWS

Top Navy official raised concerns about multiple leaking valves at Red Hill, according to leaked email

By Sophie Cocke • Nov. 10, 2021

In late October, Navy officials began contacting media outlets ahead of announcing the results of an investigation into a May fuel leak at their Red Hill Underground Fuel Storage Facility, which has been the subject of contentious debates about the risk it poses to Oahu's drinking water.

They wanted to make sure that one point, in particular, was emphasized: The fuel leak was due to a control room operator's unfortunate failure to follow correct procedures. The leak, according to Navy officials, was not the result of larger issues at its aging tank farm.

"Had the control room operator followed the procedures outlined in the operations order, this situation would not have occurred," Capt. Albert Hornyak, commanding officer at the Naval Supply Systems Command's Fleet Logistics Center Pearl Harbor, told the Honolulu Star-Advertiser Oct. 26 as he discussed the results of the investigation into the May 6 leak of 1,618 gallons of jet fuel.

But what Navy officials didn't tell the media, or state regulators, was that just weeks prior, on Sept. 29, they had detected another pressure surge in a pipeline similar to the one that caused the May fuel leak, and they were so concerned that they shut down Red Hill operations for nine days while they investigated.

In fact, Hornyak believed there could be multiple valves throughout Red Hill's pipeline system that were leaking, according to an Oct. 3 email Hornyak sent to other top Navy officials, a copy of which was obtained by the Star-Advertiser this week.

A visual inspection of three pipelines leading into an underground pump house found a "sagging pressure condition," which was similar to the conditions that led to the May 6 leak, according to Hornyak's email.

"Red Hill operations will remain paused until the root cause creating the sagging conditions is determined," Hornyak wrote, adding that his team was going "line by line" through data to check if the operation order for transfers was adhered to and if "additional out of balance situations have occurred."

"Additionally, based on the May 6th event as well as this most recent event, I believe there are multiple valves in the Red Hill pipeline system (that) are potentially leaking," Hornyak said in the email.

The Navy, in response to questions about the email, said the temporary shutdown of Red Hill was "representative of the abundance of caution used in the professional management of complex fuel operations at Red Hill."

"No fuel was released, no damage occurred, there was no impact to fuel delivery, and operations resumed after taking a pause to assess a surge in the system," said Mike Andrews, a spokesman for Navy Region Hawaii, by email. He said Red Hill operations were paused from Sept. 30 until Oct. 8.

Navy officials did not respond to specific questions about why the pressure surge and shutdown of Red Hill weren't publicly disclosed, or whether they alerted the state Department of Health, which regulates the facility, that they were concerned there might be multiple pipeline valves that are leaking.

A spokeswoman for DOH said on Tuesday that the department was not aware of the Sept. 29 pipeline surge or operations being suspended at Red Hill, but declined to comment further.

The revelation about the temporary shutdown of Red Hill and concerns about the pipeline system come at a sensitive time for the Navy, which is trying to persuade DOH to issue it a five-year permit to continue operating its tank farm.

The Hawaii Sierra Club and Honolulu Board of Water Supply are engaged in a contested case hearing over the permit and have raised concerns for years that the massive tank farm can't be operated safely. The facility includes 20 underground tanks, each capable of holding 12.5 million gallons of fuel, that sit just 100 feet above an aquifer that serves as a major source of drinking water for Oahu. They've urged the Navy to install major safeguards, such as a tank-within-a-tank system, or move the tanks altogether.

The Navy also is under pressure from Hawaii's congressional delegation, which last week called on the U.S. Department of Defense's Inspector General to launch an independent investigation into whether the Navy "covered up evidence or intentionally delayed" notifying state regulators earlier this year about a separate leak of fuel into Pearl Harbor.

In a letter to acting Inspector General Sean O'Donnell, the delegation said the investigation was needed to "restore the community's trust in how the Navy operates Red Hill."

On Tuesday, U.S. Sen. Mazie Hirono told the Star-Advertiser that the Navy had not informed her of the shutdown at Red Hill. She said she was "frustrated having to learn about incidents at Red Hill from sources other than the Navy."

"This is yet another example of why the delegation is requesting both a meeting with the Secretary of the Navy and an IG investigation," Hirono said in an emailed statement. "We need the facts about what is happening at Red Hill, and I expect to swiftly hear from the Navy about this matter."

The Navy said the Sept. 29 pressure surge in its F-24 pipeline was detected during a routine transfer of fuel from Red Hill's tank No. 4 to Hickam Airfield storage tanks. Operations were paused while inspectors examined the F-24 pipeline, tanks and valves.

Andrews said an investigation found that the surge was the result of a "vacuum created by thermal contraction due to normal temperature variations," and that operation orders that equalize pressure in the pipeline have since been refined.

"This is the type of analysis and modification to procedures that ensure safe operations of the Red Hill facility," he said.

Andrews said that pausing operations at Red Hill in response to such an event is routine, but he didn't respond to a question about whether such a shutdown had occurred in the past.

According to David Kimo Frankel, an attorney for the Hawaii Sierra Club, pausing Red Hill operations for more than a week "is not a routine event."

"If normal temperature variations are causing vacuums and surges that is not comforting at all," Frankel said.

He said the situation raised multiple concerns, including a lack of transparency on the part of the Navy.

“This is troubling because it suggests there may be multiple leaks,” Frankel said, adding that the pressure conditions raise concerns that a pipeline-related explosion could ignite a fire in the fuel facility.

EXHIBIT G

STATE OF HAWAII
DEPARTMENT OF HEALTH
SOLID AND HAZARDOUS WASTE BRANCH
UNDERGROUND STORAGE TANK SECTION

NOTICE OF VIOLATION AND ORDER

TO: THE UNITED STATES DEPARTMENT OF THE NAVY c/o REAR ADMIRAL TIMOTHY KOTT COMMANDER NAVY REGION HAWAII 850 Ticonderoga St., Suite 110 JBPHH, Hawaii 96860-5101 Respondent	**NOVO No. 21-UST-EA-01** Re: Violations at the underground storage tank system located at Red Hill/Pearl Harbor-Hickam on the Island of Oahu, aka the Red Hill Bulk Fuel Storage Facility

This Notice of Violation and Order (NOVO) is an administrative enforcement action initiated pursuant to chapters 91 and 342L of the Hawaii Revised Statutes (HRS) and chapters 11-1 and 11-280.1 of the Hawaii Administrative Rules (HAR) by the DEPARTMENT OF HEALTH (the "Department") against THE UNITED STATES DEPARTMENT OF THE NAVY, c/o REAR ADMIRAL TIMOTHY KOTT, COMMANDER NAVY REGION HAWAII (the "Respondent") and is based upon violations observed during an inspection of the Red Hill Bulk Fuel Storage Facility (the "Facility") that was conducted during the period of September 28, 2020 to October 9, 2020 (the "Inspection") and the subsequent examination of information related thereto. Respondent is the owner and operator of the Facility. This NOVO concerns only the violations identified herein and does not function to preclude or limit actions by any public agency or private party. The Department reserves the right to bring other actions for other violations as may be necessary to protect public health and the environment.

I. NOTICE OF VIOLATION

Statutes/Rules	In accordance with the Resource Conservation and Recovery Act (RCRA) [*see* 42 U.S.C. sections 6991f and 6991g], the Department has authority to investigate federal underground storage tank (UST) facilities and to require immediate compliance with, and to assess an administrative penalty for violations of, chapter 342L, HRS, or any rule adopted pursuant thereto. **Section 342L-7(b), HRS,** states that: "For the purpose of developing or assisting in the development of any rule, conducting any study, investigating an actual or suspected release, monitoring for compliance or noncompliance with this chapter, any rule or standard adopted pursuant to this chapter, or any permit or variance issued pursuant to this chapter, taking release response action, or enforcing this chapter, any duly authorized representative of the department may: (1) Enter at reasonable times any establishment or place; (2) Inspect and obtain samples from any person of any regulated substances contained in any underground storage tank or tank system; (3) Conduct monitoring or testing of the tanks or tank systems, associated equipment, contents, or soils, air, surface water, or groundwater; and (4) Take release response action." **Section 342L-8(a), HRS,** states that: "If the Director determines that any person has violated or is violating this chapter, any rule adopted pursuant to this chapter, or any term or condition of a permit or variance issued pursuant to this chapter, the director may do one or more of the following:

(1) Issue an order assessing an administrative penalty for any past or current violation;
(2) Issue an order requiring compliance immediately or within a specified time; or
(3) Commence a civil action in the circuit environmental court in the circuit in which the violation occurred or the person resides or maintains the person's principal place of business for appropriate relief, including a temporary, preliminary, or permanent injunction, the imposition and collection of civil penalties, or other relief."

Section 342L-10(a), HRS, states that:
"Any person who violates this chapter, any rule adopted pursuant to this chapter, or any condition of a permit or variance issued pursuant to this chapter shall be fined not more than $25,000 for each individual tank for each day of each violation. Each day of each violation shall constitute a separate offense. In addition, any person who fails to comply with an order issued under this chapter within the time specified in the order shall be fined not more than $25,000 for each day of noncompliance with the order. Any action taken in environmental court to impose or collect the penalty provided for in this subsection shall be considered a civil action."

Section 11-280.1-31(1), HAR, requires that for metal UST systems with corrosion protection, the corrosion protection system must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

Section 11-280.1-33(a)(5), HAR, requires that prior to the return to use of a repaired UST system, any repaired piping that routinely contains product must pass a line tightness test in accordance with section 11-280.1-44(2).

The term "repair" means "to restore to proper operating condition a tank, pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, release detection equipment or other UST system component that has caused a release of product from the UST system or has failed to function properly." [section 11-280.1-12, HAR]

The line tightness test must be able to "detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure." [section 11-280.1-44(2), HAR]

Section 11-280.1-35(a)(1), HAR, requires that spill prevention equipment (such as a catchment basin, spill bucket, or other spill containment device) prevent releases to the environment by either being double walled and periodically monitored at least once every thirty-one (31) days, or being tested for liquid tightness at least once every three hundred sixty-five (365) days in a manner prescribed by the manufacturer, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, or as otherwise approved by the Department.

Section 11-280.1-36(a)(4), HAR, requires walkthrough inspections of hydrant pits to visually check for damage, remove liquid or debris, and check for any leaks at least once every thirty-one (31) days where confined space entry is not required.

Section 11-280.1-41(a)(2)(A), HAR, requires tanks installed before July 15, 2018 that are part of an airport hydrant fuel distribution system or a UST system with field-constructed tanks, and that are not field-constructed tanks with a capacity greater than 50,000 gallons, to be monitored for releases at least every thirty-one days using one of the methods listed in section 11-280.1-43(4) to (9), HAR.

Nature of the Violations	***Note: The counts below reflect only those violations for which a penalty has been assessed. The penalties assigned to each count, and instructions with respect to areas of non-compliance, are contained in the Order below. This NOVO is the result of a routine UST compliance inspection, is being addressed separate and apart from the contested case in DOH Docket No. 19-UST-EA-01, and is in no way meant to influence the final decision in that contested case. The inclusion of or omission from this NOVO of any area of potential non-compliance with chapter 11-280.1, HAR, that may also be subject to dispute in the contested case in Doc. No. 19-UST-EA-01 should not be interpreted as a declaration by the Department of a position in that other matter.*** **Count I:** At the time of Inspection, a device referred to by Respondent as Rectifier #10, intended to provide corrosion protection (via electrical current, i.e., "cathodic protection") for the underground pipeline running from the pump house to the aboveground storage tank referred to by Respondent as AST #55, was not in operation. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-31(1), HAR.* **Count II:** At the time of Inspection, the Respondent had failed to perform adequate line tightness testing on repaired piping prior to returning that piping to service. The repaired piping in question consisted of three (3) active lines identified as containing the fuels JP-5, F-24 and F-76 transporting fuel from the pump house to Hotel Pier (aka the "Hotel Pier" pipelines). Repairs, including but not limited to welding and other similar efforts, were made to improve the functionality of the pipelines. At the time of Inspection, however, Respondent had not performed a line tightness test at a leak rate of 0.1 gph in accordance with section 11-280.1-44(2) on any of the three (3) repaired Hotel Pier pipelines prior to their return to use. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-33(a)(5), HAR.* **Count III:** At the time of Inspection, Respondent had failed to test, at least annually and in a manner prescribed by the manufacturer, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, or as otherwise approved by the Department, the integrity of five (5) portable spill prevention equipment modules (i.e., catchments used to contain accidental drips during fuel receipts), located at the Facility's various piers and the Kuahua truck loading rack where fuel was routinely transferred from vehicles to the Facility. Additionally, Respondent failed to test, at least annually and in a manner prescribed by the manufacturer, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory, or as otherwise approved by the Department, the integrity of four (4) fixed spill containment structures (concrete structures) located at the Hickam truck loading rack. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-35(a)(1), HAR.* **Count IV:** At the time of Inspection, Respondent had failed to perform an adequate walkthrough inspection by visually checking the Diamond Head Hydrant Loop pit 21D for damage, removing liquid or debris, and checking for any leaks at least every thirty-one (31) days. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-36(a)(4), HAR.*

	Count V: At the time of Inspection, Respondent was not utilizing any form of release detection for two (2) double-walled underground storage tanks referred to by Respondent as the Diamond Head (2,000 gal., installed on or about July 2010) and Ewa (4,000 gal., installed on or about May 2006) Product Recovery Tanks. Since these tanks were installed before July 15, 2018, are part of an airport hydrant fuel distribution system, and have a capacity of less than or equal to fifty thousand (50,000) gallons, they need to be monitored with release detection at least every thirty-one (31) days using one of the methods listed in section 11-280.1-43(4) to (9), HAR. *Consequently, at the time of Inspection, Respondent was in violation of section 11-280.1-41(a)(2)(A), HAR.*

II. ORDER

Respondent is hereby ordered to:

1. Within thirty (30) days of receipt of this NOVO, notify the Department of, and describe in detail, any and all corrective actions undertaken to remedy the violations described Counts I, III, IV, and V in this NOVO and any and all efforts to return the Facility to compliance with chapter 11-280.1, HAR.

2. Within thirty (30) days of receipt of this NOVO, submit to the Department for review and approval, a Work Plan and Implementation Schedule to correct the following areas of continued non-compliance:

    a) The violation contained, and described in more detail, in Count II.

    b) The Facility continues to repair USTs without performing an adequate tank tightness test. Per section 11-280.1-33(a), HAR, Respondent must "ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances." Further, section 11-280.1-33(a)(4), HAR, specifies that "[p]rior to the return to use of a repaired UST system, any repaired USTs must pass a tank tightness test in accordance with section 11-280.1-43(3)." Section 11-280.1-43(3), HAR, provides that "[t]ank tightness testing (or another test of equivalent performance) must be capable of detecting a **0.1 gallon per hour leak rate** from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table." (emphasis added). Respondent's process of "Clean, Inspect and Repair" (CIR) necessarily involves the repair of tanks, all of which must be tested for tightness in accordance with chapter 11-280.1, HAR. The tanks Respondent refers to as Tank No. 5 and the "surge tanks" are examples of USTs to which this chapter applies and which remain out of compliance with section 11-280.1-33(a) and 11-280.1-33(a)(4).

3. Upon the Department's approval of the Work Plan and Implementation Schedule, Respondent shall implement the Work Plan in accordance with the approved Implementation Schedule and work at the site shall commence no later than thirty (30) days after the Department's approval.

4. Pay an administrative penalty as follows for the above violations:

    a) Count I - Failure to provide corrosion protection in violation of section 11-280.1-31(1), HAR $30,000.00

    b) Count II - Failure to perform a line tightness test on three (3) active pipelines subsequent to repairs in violation of section 11-280.1-33(a)(5), HAR $179,982.00

c)	Count III - Failure to perform a liquid tightness test on spill prevention equipment in violation of section 11-280.1-35(a)(1), HAR	$22,950.00
d)	Count IV - Failure to perform an adequate walkthrough inspection in violation of section 11-280.1-36(a)(4), HAR	$2,250.00
e)	Count V - Failure to maintain adequate release detection in violation of section 11-280.1-41(a)(2)(A), HAR	$90,000.00

Total administrative penalty: $325,182.00

This NOVO becomes final and enforceable, and the penalty becomes due and payable, 20 days after your receipt of this NOVO, unless before the 20 days expire, you submit a written request for a hearing to the Hearings Officer, c/o Director of Health, Department of Health, 1250 Punchbowl Street, Third Floor, Honolulu, HI 96813 and to the Solid and Hazardous Waste Branch, Department of Health, 2827 Waimano Home Road #100, Pearl City, Hawaii 96782.

In any request for a hearing, please include a copy of this NOVO. At a hearing, you may seek to avoid any penalty, and the Department may seek the maximum penalty per day, per violation. Parties may present evidence and witnesses on their behalf, and may examine and cross-examine all witnesses and evidence presented by the Department. Parties may be represented by attorneys at their own expense, or they may represent themselves. Any hearing will be in accordance with chapter 91, HRS, and chapter 11-1, HAR. The final administrative penalty will be determined at the conclusion of the hearing and will be based upon all the evidence. The final penalty may be greater or less than that contained in this NOVO, or no penalty at all.

In lieu of a hearing, you may send a certified check or money order to the Underground Storage Tank Section of the Department of Health, 2827 Waimano Home Road #100, Pearl City, Hawaii 96782, within 20 days of your receipt of this NOVO, in an amount equal to the administrative penalty noted above and complete any corrective action required by this NOVO. This will satisfy the NOVO and terminate this administrative action. Upon receipt of the full penalty amount and confirmation of the satisfactory completion of any corrective action, the Department will notify you that this administrative action has been closed. Any certified check or money order should be made payable to the "State of Hawaii" and include the NOVO reference number.

If you have questions, please call Lene Ichinotsubo, P.E., Acting Chief of the Solid and Hazardous Waste Branch at (808) 586-4226. If you have special needs due to a disability and require accommodation to aid you in participating in the hearing or pre-hearing conference, please contact the Hearings Officer at (808) 586-4409 (voice) or through the Telecommunications Relay Service (711), at least ten (10) working days before the hearing or pre-hearing conference date.

DATED: Honolulu, Hawaii October 26, 2021

DEPARTMENT OF HEALTH
STATE OF HAWAII

Kathleen Ho

KATHLEEN S. HO
Deputy Director for Environmental Health

APPROVED AS TO FORM:

Wade H. Hargrove III
Deputy Attorney General

EXHIBIT H

2021 Annual

Water Quality Report

Joint Base Pearl Harbor-Hickam Water System

(Waiawa, Halawa & Red Hill Sources)

This report meets federal and state requirements for Consumer Confidence Reports. This report is updated annually and reflects monitoring data collected up to Dec. 31, 2020.

The Navy is pleased to provide you with this year's annual Water Quality Report for the Joint Base Pearl Harbor-Hickam Water System.

This pamphlet provides information about the water that has been delivered to you over the past year. It describes where your water comes from, what it contains, and how it compares to standards for safe drinking water.

Our goal is, and always has been, to provide you safe and dependable drinking water.

Water Provider

The Naval Facilities Engineering Systems Command (NAVFAC) Hawaii operates the water system servicing your area. As the Navy water provider in the State of Hawaii (State), we primarily supply water to military installations and housing.

Drinking Water Standards

The Environmental Protection Agency (EPA) and State regulations require us to test your water for contaminants on a regular basis, making sure it is safe to drink, and to report our results accordingly.

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration does the same for bottled water.

In the latest compliance monitoring period, we conducted tests for over 70 contaminants that have potential for being found in your drinking water. Tables 1-1, 1-2, 1-3, 1-4, 1-5, and 1-6 show the levels of concentrations of regulated contaminants found in your water. In all cases, the levels measured met both EPA and State requirements for safe drinking water.

We are continually working to protect your drinking water from contaminants. The State's Department of Health completed the Source Water Assessment in 2004. This document identifies the susceptibility of your water supply to contamination. The source water assessment is available for review by contacting NAVFAC Hawaii Public Affairs, at 808-471-7300.

Source of Water

Your drinking water comes from three ground water sources: Waiawa, Halawa, and Red Hill. Ground water is naturally filtered as it travels from the surface to the aquifer below ground. The water is pumped up from the aquifer, disinfected, fluoridated, and piped into the distribution system.

For a limited time during 2020:

- **The Manana housing area was supplemented with water from the Honolulu Board of Water Supply's (BWS) Pearl City Shaft and Well 1.**

Possible Source of Contaminants

The sources of drinking water (both tap water and bottled water) include: rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals. It can also pick up other substances resulting from the presence of animals or human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Potential Contaminants

Contaminants that may be present in your source water include:

Microbial contaminants – such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants – such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides – which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants – including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radionuclide contaminants – which can be naturally-occurring or be the result of oil and gas production and mining activities.

Lead – If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead

in drinking water is primarily from materials and components associated with service lines and home plumbing. NAVFAC Hawaii is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at ***www.epa.gov/safewater/lead.***

Navy Water Requirements

In accordance with Navy policy, chlorine and fluoride are added to your water supply after the water is pumped from the ground. We try to maintain the Navy's recommended concentration of approximately 0.7 ppm for fluoride and 0.2 ppm for chlorine throughout the distribution system.

2020 Testing at Red Hill Shaft

In January 2014, a fuel release from Tank #5 at the Red Hill Underground Fuel Storage Facility was reported. As a proactive measure and in accordance with the 2014 Transition Plan executed between the Navy and the State Department of Health, we have been conducting testing at the Red Hill Drinking Water Shaft above what is required by drinking water regulation for several years which includes volatile organic compound (VOC), semi-volatile organic compound (SVOC), lead, and total petroleum hydrocarbon-diesel (TPH-d). Table 1-6 shows the levels of contaminants detected at the Red Hill Drinking Water Shaft in 2020. We will continue to conduct this testing and include the test results in the future Water Quality Reports.

Concerns / Additional Copies

NAVFAC Hawaii does not have routine meetings about the water system. For questions and/or information, please contact NAVFAC Hawaii Public Affairs at 808-471-7300. For additional copies of this and other Navy water reports, go to:

- ***www.cnic.navy.mil/regions/cnrh/om/environmental/water_quality_information.html***
- ***www.navfac.navy.mil/navfac_worldwide/pacific/fecs/hawaii/about_us/hawaii_documents/Reports.html***

Please share this information with all other people who drink this water, especially those who may not have received this notice.

Official Address

Naval Facilities Engineering Systems Command, Hawaii
400 Marshall Road, JBPHH, HI 96860-3139

Printed June 2021

Water Quality Data Table

The following tables list contaminants which were detected during the latest round of sampling required by EPA and State regulations. The water samples were collected from either the source water or distribution system and analyzed by the State, BWS and/or NAVFAC Hawaii. The presence of contaminants does not necessarily indicate that the water poses a health risk. You may obtain more information about contaminants and potential health effects by calling the EPA's Safe Drinking Water Hotline 1-800-426-4791 or the State's Department of Health at 808-586-4258.

Contaminants in the Navy's Source Water **Table 1-1**

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	Highest Level Detected	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
Inorganic Contaminants							
Barium (ppm)	2	2	0.02	nd – 0.02	2017[1]	Erosion of natural deposits	No
Chromium (total) (ppb)	100	100	2.1	nd – 2.1	2017[1]	Naturally-occurring	No
Fluoride (ppm)	4	4	0.77	nd – 0.77	2020	Erosion of natural deposits; Water additive which promotes strong teeth	No
Lead (ppb)	15	0	10.1	nd – 10.1	2019[1]	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder	No
Nitrate (ppm)	10	10	2.0	0.52 – 2.0	2020	Runoff from fertilizer use; Erosion of natural deposits	No
Organic Contaminants							
Chlordane (ppb)	2	0	0.36	nd – 0.36	2017[1]	Residue of banned termiticide	No
Heptachlor epoxide (ppt)	200	0	20	nd – 20	2017[1]	Breakdown of heptachlor (banned pesticide)	No
Unregulated Contaminants[2]							
Bromide (ppb)	n/a	n/a	765	124 - 765	2018[1]	Naturally-occurring	n/a
Chloride (ppm)	250[3]	n/a	235	34 - 235	2020	Naturally-occurring	n/a
Dieldrin (ppb)	n/a	n/a	0.05	nd – 0.05	2017[1]	Residue of banned insecticide	n/a
Manganese (ppb)	n/a	n/a	1.20	nd – 1.20	2018[1]	Naturally-occurring	n/a
Sodium (ppm)	n/a	n/a	124	26 – 124	2017[1]	Naturally-occurring	n/a
Sulfate (ppm)	250[3]	n/a	46	nd - 46	2020	Naturally-occurring	n/a

Contaminants in the BWS Source Water (Serving Manana Housing) **Table 1-2**

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	Highest Average Level Detected	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
Regulated Contaminants							
1,2,3-Trichloropropane (ppb)	0.6	0	0.050	0.047 – 0.052	2020	Fumigant previously used in agriculture	No
Barium (ppm)	2	2	0.004	0.003 – 0.004	2020	Erosion of natural deposits	No
Chromium (ppb)	100	100	1.3	1.3	2020	Naturally-occurring	No
Fluoride (ppm)	4	4	0.068	0.058 – 0.068	2020	Erosion of natural deposits; Water additive which promotes strong teeth	No
Nitrate (ppm)	10	10	0.970	0.690 – 0.970	2020	Runoff from fertilizer use; Erosion of natural deposits	No
Unregulated Contaminants[2]							
Chlorate (ppb)	n/a	n/a	26	22 – 26	2020	Byproduct of the disinfection process	n/a
Chloride (ppm)	250[3]	n/a	61	37 – 61	2020	Naturally-occurring	n/a
Chromium, hexavalent (ppb)	n/a	n/a	1.4	1.3 – 1.4	2020	Naturally-occurring	n/a
Dieldrin (ppb)	n/a	n/a	0.008	nd - 0.016	2020	Residue of banned pesticide	n/a
Sodium (ppm)	n/a	n/a	37	30-37	2020	Naturally-occurring	n/a
Strontium (ppb)	n/a	n/a	79	54-79	2020	Naturally-occurring	n/a
Sulfate (ppm)	250[3]	n/a	14	9.4 – 14	2020	Naturally-occurring	n/a
Vanadium (ppb)	n/a	n/a	11	11	2020	Naturally-occurring	n/a

Contaminants in the Distribution System **Table 1-3**

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	Highest Level Detected	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
Copper (ppm)	AL = 1.3	1.3	0.09[4]	0[5]	2019[1]	Corrosion of household plumbing systems; Erosion of natural deposits	No
Fluoride (ppm)	4	4	1.16	nd – 1.16	2020	Erosion of natural deposits; Water additive which promotes strong teeth	No

Disinfection Agent **Table 1-4**

Contaminants (units)	MRDL (Allowed)	MRDLG (Goal)	Highest Average	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
Residual Chlorine (ppm)	4	4	0.5[6]	0.2 – 1.0	2020	Water additive used to control microbes	No

Disinfection Byproducts **Table 1-5**

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	Highest Level Detected	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
Total Trihalomethanes (ppb)	80	n/a	3.7	3.7	2020	Byproduct of drinking water disinfection	No

2020 Testing – Red Hill Shaft **Table 1-6**

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	DOH EAL	Highest Level Detected	Range of Detection	Violation
TPH-d, C8-C18 (ppb)	n/a	n/a	400	490[7]	nd – 490	n/a
Lead (ppb)	AL = 15	0	15	0.66	nd – 0.66	No
DOC (ppm)	n/a	n/a	n/a	1.4	nd – 1.4	n/a

Table Definitions:

AL **Action Level.** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

DOH EAL **Department of Health Environmental Action Level.** Risk-based levels published by DOH for compounds that do not have promulgated MCL values.

MCL **Maximum Contaminant Level.** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG **Maximum Contaminant Level Goal.** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL **Maximum Residual Disinfectant Level**. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG **Maximum Residual Disinfectant Level Goal**. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

TPH-d Total Petroleum Hydrocarbons as diesel fuel.

Table Abbreviations:

n/a not applicable.

nd not detectable at testing limits.

ppb parts per billion or micrograms per liter.

ppm parts per million or milligrams per liter.

ppt parts per trillion or nanograms per liter.

Table Notes:

1. The State and EPA require us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The date of the oldest sample collected is as indicated.
2. These results are for informational purposes. There are no set standards. EPA will use this data to help determine where certain contaminants occur and whether it needs to regulate these contaminants. At this time, these contaminants do not have MCLs or MCLGs.
3. These are Secondary Maximum Contaminant Levels not enforced by EPA.
4. 90th percentile value of the samples collected.
5. Number of samples above the action level.
6. After each quarter, a running average is calculated using the preceding 12 months of data. The posted amount is the highest running average for the year.
7. One TPH-d (C8-C18) EAL exceedance occurred during 2020 testing on a post-chlorination sample. Pre-chlorination samples are believed to be more representative of any potential contact with fuels stored at the Red Hill Bulk Fuel Storage Facility and TPH-d (C8-C18) was not detectable at testing limits for all 2020 pre-chlorination samples. Hawaii Department of Health (HDOH) and the Navy will continue to conduct testing and include results in future Water Quality Reports.

Note: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline 1-800-426-4791.

Additional Testing - PFAS

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the United States, since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS chemicals are persistent in the environment and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

There is currently no established federal water quality regulation for any PFAS compounds. In May 2016, the EPA established a health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS.

Out of an abundance of caution for your safety, the Department of Defense's (DoD) PFAS testing and response actions go beyond EPA Safe Drinking Water Act requirements. In 2020 the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years.

The EPA's health advisory states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope, and localized source of contamination to inform next steps.

Has JBPHH tested its water for PFAS?

Yes. In November 2020 samples were collected from Halawa Shaft Chlorinator, Waiawa Shaft Chlorinator, and Red Hill Shaft Chlorinator.

We are informing you that 5 of the 18 PFAS compounds covered by the sampling method were detected above the method reporting limit (MRL). PFOA and PFOS were below the EPA HA level. The results are provided in Table 1-7. As PFOA and PFOS were below the EPA HA, there is no immediate cause for concern, but we will continue to monitor the drinking water closely to ensure that remains the case. In accordance with DoD policy, JBPHH will collect quarterly samples for PFAS for one year and then every two years thereafter as long as the results are below the MRL.

2020 PFAS Sampling Results at JBPHH **Table 1-7**

Contaminants (ppt)	MCL (Allowed)	Health Advisory (ppt)	Highest Level Detected	Range of Detection	Year of Sample	Violation
Perfluorooctanoic acid (PFOA)	n/a	70	3.2	nd – 3.2	2020	n/a
Perfluorooctanesulfonic acid (PFOS)	n/a	70	5.5	nd – 5.5	2020	n/a
Perfluorobutanesulfonic acid (PFBS)	n/a	n/a	2.4	nd – 2.4	2020	n/a
Perfluoroheptanoic acid (PFHpA)	n/a	n/a	nd	nd	2020	n/a
Perfluorohexanesulfonic acid (PFHxS)	n/a	n/a	4.0	nd – 4.0	2020	n/a
Perfluorononanoic acid (PFNA)	n/a	n/a	nd	nd	2020	n/a
Perfluorodecanoic acid (PFDA)	n/a	n/a	nd	nd	2020	n/a
Perfluorohexanoic acid (PFHxA)	n/a	n/a	2.9	nd – 2.9	2020	n/a
Perfluorododecanoic acid (PFDoA)	n/a	n/a	nd	nd	2020	n/a
Perfluorotridecanoic acid (PFTrDA)	n/a	n/a	nd	nd	2020	n/a
Perfluoroundecanoic acid (PFUnA)	n/a	n/a	nd	nd	2020	n/a
N-ethyl perfluorooctanesulfonamidoacetic acid	n/a	n/a	nd	nd	2020	n/a
N-methyl perfluorooctanesulfonamidoacetic acid	n/a	n/a	nd	nd	2020	n/a
Hexafluoropropylene oxide dimer acid (HFPO-DA)	n/a	n/a	nd	nd	2020	n/a
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	n/a	n/a	nd	nd	2020	n/a
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid	n/a	n/a	nd	nd	2020	n/a
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	n/a	n/a	nd	nd	2020	n/a
Perfluorotetradecanoic acid (PFTA)	n/a	n/a	nd	nd	2020	n/a

EXHIBIT I

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021
Drinking Water Sampling - RHMW2254-01 Pre-Chlorination
DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event		SDG #		97057	97057	97159	97159	97221	97221	97307	97307
		Sample ID		ERH1582	ERH1581	ERH1590	ERH1589	ERH1598	ERH1597	ERH1623	ERH1622
		Collected		8/5/2021	8/5/2021	8/12/2021	8/12/2021	8/19/2021	8/19/2021	8/26/2021	8/26/2021
Final results provided (validation pending)		Sample Type		Primary	Trip Blank	Primary	Trip Blank	Primary	Trip Blank	Primary	Trip Blank
Final results provided (validation completed)		Location		RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF	RHSF
Analyte	**Screening Criteria**	**SSRBL**	**Units**	**Result Q**	**Results Q**	**Result Q**	**Results Q**	**Result Q**	**Results Q**	**Result Q**	**Results Q**
Benzene	5	750	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Ethylbenzene	30	–	ug/L	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<0.50 U
Toluene	40	–	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
Xylenes (Total)	20	–	ug/L	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U	<0.30 U
TPH-g	300	–	ug/L	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U	<18.0 U
TPH-d	400	4500	ug/L	<300.0 U	–	<300.0 U	–	<300.0 U	–	<300.0 U	–
TPH-d w/ Silica Gel Cleanup[1]		–	ug/L	<300.0 U	–	<300.0 U	–	<300.0 U	–	<300.0 U	–
TPH-o	500	–	ug/L	540 [2]	–	480	–	320	–	530 [2]	–
TPH-o w/ Silica Gel Cleanup[1]		–	ug/L	<300.0 U	–	<300.0	–	<300.0 U	–	<300.0 U	–
1-Methylnaphthalene	10	–	ug/L	<0.10 U	–	<0.10 U	–	<0.10 U	–	<0.10 U	–
2-Methylnaphthalene	10	–	ug/L	<0.10 U	–	<0.10 U	–	<0.10 U	–	<0.10 U	–
Naphthalene	17	–	ug/L	<0.10 U	–	<0.10 U	–	<0.10 U	–	<0.10 U	–

Notes:

[1] - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

[2] - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria (EAL). TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease. DOH does not have a screening criteria (EAL) for silica gel cleanup.

J - estimated value
U - nondetect value
ID - identification
TPH-g - total petroleum hydrocarbons gasoline
TPH-d - total petroleum hydrocarbons diesel (JP-5)
TPH-o - total petroleum hydrocarbons oil/grease
"–" - not applicable
RHSF - Drinking water samples collected from an operating pump, each equipped with a tap or spigot for sampling.

Red Hill Bulk Fuel Storage Facility
Notice of Interest 20210507-0852 JP-5 spill that occurred on 6 May 2021
Additional Sampling: Groundwater - Exterior Wells
DISCLAIMER: Preliminary Data: Undergoing Validation - Subject to Change.

2021 NOI Emergency Groundwater Sampling Event

Preliminary results provided (final results pending)

Final results provided (validation pending)

			SDG #	B21100166	B21100166	B21100166	B21100166	B21100166	B21100166	B21100166	B21100166
			Sample ID	ERH1762	ERH1763	ERH1764	ERH1765	ERH1766	ERH1768	ERH1769	ERH1770
			Collected	10/1/2021	10/1/2021	9/30/2021	9/30/2021	9/30/2021	10/1/2021	9/30/2021	10/1/2021
			Sampling Method [3, 4]	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer	Bailer
			Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
			Location	RHMW04	RHMW06	RHMW08	RHMW09	RHMW10	RHMW16	RHMW19	OWDFMW01
Analyte	**Screening Criteria**	**SSRBL**	**Units**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**	**Result Q**
TPH-d	400	4500	ug/L	<150 U	<150 U	<150 U	<140 U	<140 U	<140 U	<150 U	420
TPH-d w/ Silica Gel Cleanup[1]		–	ug/L	<120 U	<120 U	<120 U	<120 U	<120 U	<120 U	<120 U	<110 U
TPH-o	500	–	ug/L	170 J	<150 U	<150 U	<140 U	<140 U	320	380	240
TPH-o w/ Silica Gel Cleanup[1]		–	ug/L	<150 U	<150 U	<150 U	<140 U	<140 U	<140 U	<150 U	<140 U
Total Organic Carbon	–	–	ug/L	2,100	430 J	420 J	220 J	720 J	210 J	580 J	1800

Notes:

[1] - Silica Gel Cleanup is an EPA approved methodology (SW-846 Method 3630C) that separates fuel related compounds from non-fuel related or naturally-occurring compounds from the sample. When these non-fuel related compounds are reported in the sample results, the reported value is skewed high.

[2] - After the application of Silica Gel Cleanup, TPH-o levels are below the screening criteria (EAL). TPH-o detects heavy oils and greases. JP-5 is not a heavy oil or grease. DOH does not have a screening criteria (EAL) for silica gel cleanup.

[3] - Low-flow method – sample with bladder pump, after purging and from approximately mid-screen.
" - Bailer method – sample without purging and from the top of the water column.

J - estimated value

U - nondetect value

ID - identification

TPH-d - total petroleum hydrocarbons diesel (JP-5)

TPH-o - total petroleum hydrocarbons oil/grease

"–" - not applicable

EXHIBIT J

From: Gannon, Ella Foley
Sent: Friday, October 8, 2021 9:54 AM
To: 'Riddle, Marnie E CIV USN OGC WASH DC (USA)'; 'Mckay, Jonathan Cross CIV USN COMNAVREG SW SAN CA (USA)'
Cc: Brown, David K.
Subject: Availability for a Call
Attachments: Amid 'Political Concerns,' Navy Kept Quiet About Red Hill Pipeline Leaking Into Pearl Harbor - Honolulu Civil Beat.pdf

Jon and Marnie – We were extremely surprised by the attached article which appeared in the Honolulu Civil Beat today. Are you available today to discuss the implications of this on the contested case proceeding? We would like to have a call today.

Best,

Ella

Ella Foley Gannon
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DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of UNITED STATES NAVY For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	DOCKET NO. 19-UST-EA-01 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing document was served upon the following, via email, to their last known email address on November 17, 2021:

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DATED: Honolulu, Hawaii, November 17, 2021.

DANA M.O. VIOLA
Corporation Counsel

By */s/ Jeff A. Lau*
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Deputy Corporation Counsel
Attorney for Petitioner
Board of Water Supply,
City and County of Honolulu

DOCKET NO. 19-UST-EA-01, IN THE MATTER OF THE APPLICATION OF UNITED STATES NAVY FOR AN UNDERGROUND STORAGE TANK PERMIT FOR THE RED HILL BULK FUEL STORAGE FACILITY - PETITIONER HONOLULU BOARD OF WATER SUPPLY'S MEMORANDUM IN SUPPORT OF THE ENVIRONMENTAL HEALTH ADMINISTRATION'S MOTION FOR THE REOPENING OF THE HEARING AND MOTION (1) TO REOPEN THE RECORD FOR ADDITIONAL LIMITED PURPOSES, (2) TO VACATE THE HEARINGS OFFICER'S PROPOSED DECISION AND RELATED DEADLINE FOR FILING EXCEPTIONS, AND (3) FOR PRODUCTION OF DOCUMENTS AND WITNESSES FROM THE NAVY; DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A THROUGH J; CERTIFICATE OF SERVICE

19-08484

Exhibit B

COMMANDER, NAVY REGION HAWAII
PUBLIC AFFAIRS OFFICE
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JBPHH, HAWAII 96860
PHONE: 808-473-2888 FAX: 808-473-2876
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MEDIA RELEASE

FOR IMMEDIATE RELEASE
POC: Lydia Robertson, Director of Public Affairs
Cell: (808) 554-4813
Duty Cell: (808) 371-5189

November 21, 2021
Release # 21-11

Navy Responds to a Release from a Fire Suppression Drain Line at Red Hill

JOINT BASE PEARL HARBOR-HICKAM, Hawaii –

The Navy is investigating the cause of a water and fuel mix release in the drain line for the fire suppression system in the tunnel downhill of the Red Hill Bulk Fuel Storage Facility. Fleet Logistics Center Pearl Harbor (FLC PH) personnel responded to what was initially assessed as a water leak shortly after 5 p.m. Saturday, Nov. 20. This pipe is not connected to the Red Hill Fuel tanks or main fuel pipelines, all of which are secure.

Overnight, the release began to contain some amount of fuel which increased into Sunday morning. Approximately 14,000 gallons of a mix of water and fuel was contained in the lower tunnel and has been recovered and transferred to an above ground storage tank as of midday Sunday. The rate of release has reduced considerably and continues to be captured. The incident occurred roughly ¼ mile downhill of the actual fuel tanks.

The Navy made initial notification to Department of Health Saturday night and is providing updates Sunday. An investigation was started immediately and is ongoing.

There are no signs or indication of any releases to the environment, and the water remains safe to drink.

- 30 -

Exhibit C

Star Advertiser

Tuesday, November 23, 2021 | Today's Paper | 74°

HAWAII NEWS

Odor from Red Hill fuel release sparks 911 calls

By Sophie Cocke • Today • *Updated 10:41 pm*

The smell of fuel around the neighborhoods of Foster Village and Aliamanu on Saturday night, near the site of a fuel spill from the Navy's Red Hill fuel facility, was strong enough that several residents called 911 and multiple units from the Honolulu Fire Department and Federal Fire Department responded.

At the time, the Honolulu Fire Department believed that the smell was due to the refueling of storage tanks in the vicinity, and the department closed out the incident at 8:23 p.m. Saturday, according to Louise Kim McCoy, a spokeswoman for HFD.

But on Monday the Navy told the Honolulu Star-Advertiser that the odor was likely the result of the leak from a fire suppression drain line that was detected Saturday evening and not contained until Monday at 2 a.m. The Navy said approximately 14,000 gallons of fuel and water was released and that all of the mixture was contained and placed in an above-ground storage tank as of midday Monday.

"While there were other fuel operations going on that day, they are in no way connected to this incident," said Lydia Robertson, a spokeswoman for Navy Region Hawaii, by email. "All fuel operations were stopped when this incident occurred."

The Navy says it is still investigating the cause of this weekend's fuel release. It's not clear why there was fuel and water in the fire suppression drain line, or what caused it to spill.

Robertson said that when the fire suppression system is activated, "any fire fighting material that is released gets funneled to a (large hole in the tunnel that is lined)." From there, pumps push the liquid into the drain line.

However, Robertson said that the water is not "necessarily an indicator that the fire suppression system was activated."

The state Department of Health, which has regulatory authority over the Red Hill Underground Fuel Facility, said that it's investigating the leak and that "information is pending."

This latest leak at the Navy's aging Red Hill facility has elicited a new round of criticism against the Navy and its management of the fuel facility, which contains 20 massive underground tanks that provide fuel to military operations in the Indo-Asia-Pacific region. The Navy says Red Hill is part of the nation's critical infrastructure and can also provide a vital source of fuel for Hawaii during disasters and emergencies.

But the Honolulu Board of Water Supply, Hawaii Sierra Club and numerous local lawmakers have been concerned for years that the facility poses a grave risk to Oahu's drinking water supply. The tanks sit just 100 feet above a critical groundwater aquifer.

Rep. Aaron Johanson (D, Aiea-Moanalua-Foster Village-Fort Shafter), who represents the area around Red Hill, said the latest leak was particularly disconcerting because of the proximity to residential neighborhoods.

“Whether it is with respect to water quality, or the land and the soil, or even the potential for a fire hazard, what is so alarming is that all this infrastructure is embedded, or in and around, our communities,” said Johanson. “So these issues aren’t occurring in an unpopulated area in the middle of nowhere. There’s suburbia in and all around it.”

The Navy has also been under fire from Hawaii’s congressional delegation, which earlier this month requested the U.S. Department of Defense’s Inspector General to launch an independent investigation into whether the Navy “covered up evidence or intentionally delayed” notifying state regulators about a separate leak of fuel into Pearl Harbor.

U.S. Sen. Mazie Hirono told the Star-Advertiser in a statement Monday that she was “concerned and angry to learn of yet another incident at Red Hill.”

“We need a thorough investigation to get to the bottom of what is happening with both the operations and infrastructure at the facility,” said Hirono.

The Hawaii Sierra Club, which is engaged in a contentious contested case hearing with the Navy over its pending request for a state permit to continue operating the facility, also expressed alarm. The environmental group has increasingly pressed the Navy to relocate its tanks, an undertaking that the Navy says could cost upward of $10 billion and take years to complete.

“The fact that the Navy simply cannot guarantee our safety is growing ever more undeniable,” said Wayne Tanaka, director of the Hawaii Sierra Club, by email. “Beyond the fact that we now appear to have an undetected, unknown release of fuel at the facility, is the additional concern that the facility’s fire suppression system may now be compromised.

“If there’s anything that you need to have working at all times in a fuel storage facility, it is the system that will supposedly help keep it from turning it into a 150 million gallon fuel bomb.”

Tanaka said it was troubling that the Navy has provided so little information about the latest incident. It “indicates that either they still have no idea what might have happened, or they do have more information and are choosing, again, to hide information from the public,” said Tanaka. “Either scenario is also terrifying, and unacceptable.”

DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Application of UNITED STATES NAVY For an Underground Storage Tank Permit for the Red Hill Bulk Fuel Storage Facility	DOCKET NO. 19-UST-EA-01 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing document was served upon the following, via email, to their last known email address on November 23, 2021:

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DATED: Honolulu, Hawaii, November 23, 2021.

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Attorney for Petitioner
Board of Water Supply,
City and County of Honolulu

DOCKET NO. 19-UST-EA-01, IN THE MATTER OF THE APPLICATION OF UNITED STATES NAVY FOR AN UNDERGROUND STORAGE TANK PERMIT FOR THE RED HILL BULK FUEL STORAGE FACILITY - PETITIONER HONOLULU BOARD OF WATER SUPPLY'S SUPPLEMENT TO MEMORANDUM IN SUPPORT OF THE ENVIRONMENTAL HEALTH ADMINISTRATION'S MOTION FOR THE REOPENING OF THE HEARING AND AMENDED MOTION; DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A THROUGH C; CERTIFICATE OF SERVICE

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DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Emergency Order to UNITED STATES NAVY For Emergency Change-In-Service and Defueling of 20 Underground Storage Tanks, Red Hill Bulk Fuel Storage Facility	DOCKET NO. 21-UST-EA-02 MOTION FOR LEAVE TO INTERVENE OF HONOLULU BOARD OF WATER SUPPLY; DECLARATION OF ERWIN M. KAWATA, EXHIBITS A THROUGH W; DECLARATION OF ELLA FOLEY GANNON, EXHIBITS A THROUGH B; CERTIFICATE OF SERVICE

MOTION FOR LEAVE TO INTERVENE OF HONOLULU BOARD OF WATER SUPPLY

In 1987, the United States Environmental Protection Agency ("EPA") designated the aquifer that underlies the United States Department of the Navy's (the "Navy") Red Hill Bulk Fuel Storage Facility ("Red Hill") as a sole-source aquifer as it is the "principal source of drinking water" for the island of Oahu, and that "[i]f contaminated, would create a significant hazard to public health." Southern Oahu Basal Aquifer in the Peart Harbor Area at Oahu; Principal Source Aquifer Determination, 52 Fed. Reg. 45496, at 45497 (Nov. 30, 1987). Tragically, this contamination has occurred, and a significant public health hazard has and will continue to persist as a result of the Navy's release of fuel from the Red Hill facility. In response to this situation, on December 6, 2021, the Hawaii Department of Health ("DOH") issued an emergency order requiring the Navy to immediately suspend fuel storage operations at the Red Hill facility, expeditiously install a drinking water treatment system at the Navy's Red Hill Shaft drinking water well, and promptly take action to defuel the underground storage tanks ("USTs") at Red Hill (the "Emergency Order"). Disturbingly, the Navy is contesting this Emergency Order and commencing a proceeding to object to this order.

It is absolutely critical that the Honolulu Board of Water Supply ("BWS"), the entity charged with the responsibility of managing Oahu's drinking water resources and providing clean water to the majority of the residents of our island community, be a party in this contested case. Pursuant to Hawaii Administrative Rules section 11-1-35, the BWS hereby respectfully moves for leave to intervene as a party to this proceeding concerning this Emergency Order. The BWS should be permitted to intervene in this hearing because it unquestionably has a direct and substantial interest in the outcome of this contested case that will be harmed if intervention is not

granted, and that interest will not be adequately represented in the absence of intervention. In addition, granting intervention will not adversely affect any party or the timely resolution of the proceeding; rather, the BWS is uniquely positioned to provide the Director of Health and/or the Hearings Officer with subject matter expertise on issues with the potential to impact drinking water quality that will assist in understanding the complex technical issues that inform a decision on the Emergency Order. This Motion should be granted.

This Motion is based on Hawaii Administrative Rules Section 11-1-35, the filings herein, and the Declarations of Erwin M. Kawata ("Kawata Decl.") and Ella Foley Gannon ("Gannon Decl."), which taken together demonstrate that the BWS' intervention should be permitted.

I. RELEVANT BACKGROUND

The Red Hill facility is located on the island of Oahu, Hawaii, approximately 2.5 miles northeast of Pearl Harbor, occupying approximately 144 acres of land along the western edge of the Koolau Range situated on a topographic ridge that divides the Halawa Valley and the Moanalua Valley. *See* Kawata Decl. at ¶ 2. The Red Hill facility sits directly above Oahu's federally designated sole-source groundwater aquifer, the Southern Oahu Basal Aquifer, from which the BWS supplies more than three quarters of the total island-wide water supply. Oahu's sole-source aquifer is currently used to supply the island with drinking water and is an irreplaceable resource with a high vulnerability to contamination. *See id*. at ¶ 16.

The Navy stores nearly 200 million gallons of fuel at Red Hill in colossal World War II vintage USTs a mere 100 feet above this irreplaceable groundwater aquifer from which the BWS provides drinking water to residents from Moanalua to Hawaii Kai. *See id*. at ¶¶ 15, 18. The twenty Red Hill USTs were field constructed during the early 1940s by mining into the ridge to create cavities for concrete tank shells lined with ¼-inch thick steel plates welded together. *See*

id. at ¶ 14. The outside or backside of these steel liners as well as the concrete tank shells cannot be physically inspected or directly maintained. Each tank is approximately 250 feet tall, 100 feet in diameter, and provides a fuel storage capacity of up to 12.5 million gallons. *See id*. at ¶ 12. Two of the Red Hill USTs are currently out of service and two or three are generally empty as part of the Navy's ongoing clean, inspect, and repair program. This leaves at least 15 tanks, with a total capacity of over 187 million gallons, in operation directly above Oahu's sole-source aquifer. The Red Hill facility also includes a complex system of pipelines, tunnels, and other infrastructure which are utilized in managing and transporting the massive amount of fuel over this drinking water resource.

The DOH recognizes that "the storage of up to 187 million gallons of fuel, 100 feet above a drinking water resource, is inherently dangerous." *See id*. at ¶ 39. Now the Navy's inherently dangerous operations at the Red Hill facility have unquestionably, and possibly irreparably, contaminated the drinking water of tens of thousands of Oahu residents, including our service members and their families. Fuel releases from the Red Hill facility have forced the Navy to shut down the primary drinking water well from which it supplies Joint Base Pearl Harbor-Hickam and has left the BWS no choice but to stop pumping drinking water from many of the wells that service metropolitan Honolulu. *See id*. at ¶ 38. Make no mistake, the people of Oahu are in the midst of an unprecedented water crisis. Recent events demonstrate that the fuel releases from and the Navy's inability to maintain the Red Hill facility are spiraling out of control. On October 26, 2021, the DOH issued the Navy a Notice of Violation and Order finding several violations of Hawaii law during a compliance inspection conducted at the Red Hill facility from September 28, 2020 through October 8, 2020 and ordering the Navy to pay a $325,182 fine. *See id*. at ¶ 29. In the past couple of years there have been more and more fuel

releases into the environment, including a May 6, 2021 release of a reported 1,600 gallons of jet fuel from supply piping in the lower access tunnel tanks during the refilling of Tank 20, at least two releases from the Hotel Pier and Kilo Pier pipelines fed by the Red Hill facility, and a release last month of a supposed 14,000 gallons of a mixture of water and fuel from the Navy's fire suppression system. *See* Emergency Order at 2-3. These fuel releases have resulted in detections of petroleum constituents in its own drinking water supply as high as 350 times the DOH's environmental action levels ("EALs") as well as in the monitoring wells in the vicinity of Red Hill. *See* Kawata Decl. at ¶¶ 34, 35, 40. The Navy and the DOH have received hundreds of complaints from users of the Navy's water distribution system concerning fuel or chemical smells from the Navy drinking water. *See* Emergency Order at 2. This is unacceptable.

It is undisputed that the Navy's operations at Red Hill have contaminated the environment and put Oahu's critical drinking water resources at risk. Numerous episodic releases from the Red Hill facility have occurred and sampling from under and around Red Hill has demonstrated the existence of petroleum contamination in the very aquifer that sustains Oahu's water supply. *See* Kawata Decl. at ¶ 19. In January 2014, the Navy reported a release into the environment of approximately 27,000 gallons of fuel from Tank 5. *See* Emergency Order at 2. In September 2015, the Navy and the Defense Logistics Agency – the owner of the fuel stored at Red Hill – entered into an administrative order with the EPA and the DOH requiring the Navy to conduct certain investigations and other work to address fuel releases from Red Hill. *See id*. This order recognizes that corrective action by the Navy is "necessary to address potential impacts to human health, safety and the environment … due to historical, recent and potential future releases at the [Red Hill] Facility." To date, many of the deliverables required by this order still have not been approved by the regulators, with key Navy reports

disapproved and the Navy tank upgrade proposal rejected. The Emergency Order explicitly recognizes that the Navy "has consistently been unable to submit AOC deliverables to the satisfaction of the Department."

As the largest municipal drinking water utility in Hawaii, the BWS has been calling for urgent action to address the significant risked posed by the Red Hill facility for years. In fact, the BWS has submitted over 140 letters providing feedback on the Navy's AOC deliverables, including urging the Navy to take decisive action to relocate or upgrade the Red Hill facility. *See* Kawata Decl. at ¶ 27. The BWS has also informed the DOH that the Navy's operations at the Red Hill facility do not comply with Hawaii law. Specifically, the Red Hill facility cannot be operated to prevent releases for its operational life as required by Hawaii Revised Statutes § 342L-32(b), is not adequately protected from corrosion as required by HAR § 11-280.1-20, and does not meet the requirements for leak detection as required by HAR § 11-280.1-33. *See* Gannon Decl., Exhs. A, B. Unless defueled as required by the Emergency Order, the Red Hill facility and associated infrastructure will continue to release fuel into the environment imperiling our precious drinking water.

II. BASIS FOR INTERVENTION

A. Standard for Intervention

The Emergency Order calls for a contested case hearing in accordance with Hawaii Revised Statutes Chapter 91 and Hawaii Administrative Rules Chapter 11-1. *See* Emergency Order at 5. Hawaii Administrative Rules Section 11-1-35 governs intervention in contested case hearings before the DOH. As relevant to this proceeding, the DOH's rule pertaining to intervention provides that:

(a) Any person or agency not a party to the contested case hearing may seek to

become a party by filing a motion for leave to intervene. The motion shall state the grounds upon which the person or agency claims to have an interest in the proceeding. The person or agency shall file the motion at least ten days before the hearing and shall serve the motion upon the hearings officer and all parties or their attorneys. Motions for intervention will be granted to persons or agencies properly seeking and entitled as of right to be admitted as a party; otherwise, at the discretion of the hearings officer, they may be denied. As a general policy, such motions shall be denied unless the person or agency shows that it has an interest in a question of law or fact involved in the contested matter and the disposition of the contested case may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's interest is adequately represented by existing parties.

(b) The hearings officer may permit intervention to such an extent and upon such terms as the hearings officer may deem proper and shall consider whether the intervention will unduly delay or prejudice the adjudication of the rights of the original parties.

HAR § 11-1-35. As set forth in greater detail below, the BWS should be permitted to intervene in this contested case hearing and respectfully requests that the Director and/or the Hearings Officer exercise the discretion to grant the BWS' Motion.

B. The BWS Has a Direct and Substantial Interest in the Outcome of this Proceeding

The BWS has a significant, direct interest in the outcome of this this contested case hearing to both protect its customers and to fulfill its constitutional responsibilities. It is clear that the important interests of BWS' customers could be impacted by the outcome of this proceeding. The BWS was created by Act 96 of the 1929 Legislature and is a financially self-sufficient, semi-autonomous agency of the City and County of Honolulu. The BWS is the largest municipal drinking water utility in the State of Hawaii and is responsible for managing Oahu's municipal water resources and distribution system. *See* Kawata Decl. at ¶ 6. The BWS serves approximately 145 million gallons of potable water a day to roughly one million customers on Oahu. *See id*. at ¶ 7. To keep this water safe and flowing, the BWS must carefully and proactively manage its intricate system of approximately 2,100 miles of pipeline servicing

nearly every community on Oahu. *See id*. The BWS' ability to manage its resources has already been impacted by the fuel releases that are at issue in this proceeding and how future releases will be prevented is of critical importance to the BWS and its customers.

Further and importantly, Article XI, Section 9 of the Hawaii State Constitution guarantees the citizens of Hawaii the substantive "right to a clean and healthful environment." *See also Cnty. of Hawaii v. Ala Loop Homeowners*, 123 Haw. 391, 406-22, 235 P.3d 1103 (2010) *abrogated on other grounds by Tax Foundation of Hawaii v. State*, 144 Haw. 175, 189, 439 P.3d 127 (2019) (Article XI, Section 9 of the Hawaii State Constitution creates a private right of action as defined by laws relating to environmental quality). The BWS has a public trust responsibility to protect the water resources that it manages and preserve the rights of present and future generations in the waters of the State. *See* Kawata Decl. at ¶ 8. Public trust is the principle embedded in the Hawaii Constitution and State law that the Hawaii Supreme Court has consistently held obligates the state, including the BWS, to protect the purity of our water:

> "[T]he public trust doctrine applies to all water resources without exception or distinction. The state water resources trust thus embodies a dual mandate of 1) protection and 2) maximum reasonable and beneficial use. The public trust is, therefore, the duty and authority to maintain the purity and flow of our waters for future generations and to assure that the waters of our land are put to reasonable and beneficial uses."

Kauai Springs, Inc. v. Planning Comm'n of Cnty. Of Kauai, 133 Haw. 141, 172 (2014) (alteration and emphasis in original) (citations and internal quotation marks omitted). Moreover, this responsibility is "unlimited by any surface-ground distinction," extending to all water resources, including groundwater. *In re Water Use Permit Applications*, 94 Haw. 97, 133-135, 139 (2000). Given the enormous amount of fuel stored at the Red Hill facility, the location of this storage relative to our sole-source groundwater aquifer, the impacts that have already

occurred and the potential for further impacts to Oahu's critical drinking water resources, and the BWS' position as the utility responsible for providing residents with safe and dependable water service, the BWS has a unique and undeniable interest in the contested case hearing on the Emergency Order.

C. Rescinding or Modifying the Emergency Order Would Impair BWS' Ability To Protect Its Interests

The importance of the Emergency Order and the issues to be decided in this contested case cannot be overstated; it may well dictate whether Oahu's water will finally be protected or continued to be put at dire risk of contamination. That fuel release after fuel release from the Red Hill facility continues to occur – despite Navy assurances to the contrary – should no longer be a surprise. Our drinking water is imperiled now. Although testing conducted to date indicates that the water served from the BWS' drinking water wells remains compliant with standards for safe drinking water, sampling from under and around the Red Hill facility, including testing of the Navy's drinking water at its Red Hill Shaft, has demonstrated the existence of petroleum contamination in the very aquifer that the people of Oahu rely upon for clean drinking water. *See* Kawata Decl. at ¶¶ 34, 35. The release of fuel from the Red Hill facility has already caused the BWS to incur costs and take responsive actions to address the potential impacts to Oahu's drinking water. *See id*. at ¶ 22. Now the BWS has been forced to shut off its Halawa Shaft and its Halawa and Aiea wells, reducing its capacity to provide water service to its customers and ratepayers. *See id*. at ¶ 38. The issuance of the Emergency Order to defuel the Red Hill facility would provide relief to the BWS and its constituents by reducing the potential for further damage to Oahu's critical drinking water resources. *See id*. at ¶ 43. Failure to issue the order would directly impact the BWS' interests and threatens to continue to injure the BWS. *See id*. at ¶ 41.

The BWS seeks to intervene in this proceeding in order to protect this vital interest and thus intervention by the BWS is proper within the meaning of Hawaii Administrative Rules section 11-1-35.

D. BWS' Interests Are Not Adequately Represented By Existing Parties

As the agency charged with managing Oahu's municipal water resources and providing residents with safe and dependable water service, the BWS has a unique interest in the outcome of this proceeding that is not represented by the Navy, the DOH, or any other party of which the BWS is aware. The BWS' interests are averse to the Navy, which seeks to contest the Emergency Order. Likewise, the BWS' interest in managing Oahu's municipal water resources and distribution system is separate and distinct from those of the general public and/or the DOH. Accordingly, the BWS should be permitted to intervene in this contested case hearing.

E. BWS' Intervention Will Not Unduly Delay the Contested Case Hearing or Prejudice the Adjudication of the Rights of the Original Parties

The BWS filed its motion to intervene as expeditiously as possible.[1] As far as the BWS is aware, this Motion was filed before a notice of the hearing has been posted publicly and before any substantive responsive statement has been filed by the Navy. Granting the instant motion to intervene in this contested case hearing will not delay the proceedings before the Director and/or the Hearings Officer and will not cause undue prejudice to any party. Moreover, the bases for the BWS' position and many of its substantive arguments on the issues to be addressed by the Director and/or the Hearings Officer have been set forth in the BWS' filings in connection with

[1] The BWS recognizes that the deadline for moving to intervene in a contested case is typically at least ten days before the hearing; however, due to the emergency nature of this proceeding, such notice was not possible. Indeed, the initial hearing was initially scheduled for the very next day after the Emergency Order was issued. But the BWS is informed and believes that the hearing has yet to take place and is unaware of any publication of a new hearing date. Accordingly, the BWS' motion is timely.

the contested case on the Navy's Red Hill UST permit application (Dkt. No. 19-UST-EA-01), which both the Navy and the DOH have had an opportunity to review over the past two years. *See, e.g.*, Gannon Decl., Exhs. B, C. For the reasons stated herein, this intervention will not unduly delay the proceeding, hinder, or prejudice the rights of any party to the proceeding. To the contrary, the BWS should also be permitted to intervene because it can provide the Director and/or the Hearings Officer with subject matter expertise that is likely to assist in understanding complex technical issues relating to tank integrity, leak detection, corrosion protection, groundwater flow, contaminant fate and transport, and drinking water impacts that may inform the potential broader implications of a decision on the Emergency Order.

III. CONCLUSION

The BWS seeks to intervene in this proceeding to protect the BWS' substantial interests in the preservation of the irreplaceable sole-source groundwater aquifer that nourishes Oahu's drinking water supply. For the foregoing reasons, the BWS should be granted leave to intervene in this contested case hearing and should be treated as a party for purposes of this proceeding moving forward.

DATED: Honolulu, Hawaii, December 14, 2021.

DANA M.O. VIOLA
Corporation Counsel

By */s/ Jeff A. Lau*
JEFF A. LAU
Deputy Corporation Counsel
Attorney for Petitioner
Board of Water Supply,
City and County of Honolulu

DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Emergency Order to UNITED STATES NAVY For Emergency Change-In-Service and Defueling of 20 Underground Storage Tanks, Red Hill Bulk Fuel Storage Facility	DOCKET NO. 21-UST-EA-02 DECLARATION OF ELLA FOLEY GANNON; EXHIBITS A THROUGH B

DECLARATION OF ELLA FOLEY GANNON

I, ELLA FOLEY GANNON, declare as follows:

1. I am a partner with Morgan, Lewis & Bockius LLP representing Petitioner Honolulu Board of Water Supply ("BWS") in the above-entitled action. I am an attorney licensed to practice law before all State and Federal courts of the State of California and currently admitted to practice *pro hac vice* in Hawaii.

2. I make this Declaration in support of the Motion for Leave to Intervene of Honolulu Board of Water Supply. I make this declaration based upon personal knowledge and I am competent to testify as to all matters stated herein.

3. Attached hereto as Exhibit A is a true and correct copy of Petitioner Honolulu Board of Water Supply's Post-Hearing Memorandum as well as its Proposed Findings of Fact, Conclusions of Law, and Recommended Decision, which was electronically filed with the Department of Health and served on the Navy in connection with the Navy's Red Hill UST

permit application (Dkt. No. 19-UST-EA-01) on July 13, 2021.

4. Attached hereto as Exhibit B is a true and correct copy of Petitioner Honolulu Board of Water Supply's Supplement to Memorandum in Support of the Environmental Health Administration's Motion for the Reopening of the Hearing and Amended Motion, which was electronically filed with the Department of Health and served on the Navy in connection with the Navy's Red Hill UST permit application (Dkt. No. 19-UST-EA-01) on November 23, 2021.

5. I declare under penalty of perjury that the foregoing facts are true and correct to the best of my knowledge and belief.

DATED: San Francisco, California, December 14, 2021.

/s/ Ella Foley Gannon
ELLA FOLEY GANNON

DEPARTMENT OF HEALTH

STATE OF HAWAII

In the Matter of the Emergency Order to UNITED STATES NAVY For Emergency Change-In-Service and Defueling of 20 Underground Storage Tanks, Red Hill Bulk Fuel Storage Facility	DOCKET NO. 21-UST-EA-02 CERTIFICATE OF SERVICE

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing documents were served upon the following, via email, to their last known email address on December 14, 2021:

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DATED: Honolulu, Hawaii, December 14, 2021.

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By */s/ Jeff A. Lau*
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Board of Water Supply,
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DOCKET NO. 21-UST-EA-02, IN THE MATTER OF THE EMERGENCY ORDER TO UNITED STATES NAVY FOR EMERGENCY CHANGE-IN-SERVICE AND DEFUELING OF 20 UNDERGROUND STORAGE TANKS, RED HILL BULK FUEL STORAGE FACILITY - MOTION FOR LEAVE TO INTERVENE OF HONOLULU BOARD OF WATER SUPPLY; DECLARATION OF ERWIN M. KAWATA, EXHIBITS A THROUGH W; DECLARATION OF ELLA FOLEY GANNON, EXHIBITS A THROUGH B; CERTIFICATE OF SERVICE