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DEPARTMENT OF HEALTH
STATE OF HAWAII

THE UNITED STATES DEPARTMENT OF)	Department of Health Docket No.
THE NAVY, c/o REAR ADMIRAL)	21-UST-EA-02
TIMOTHY KOTT, COMMANDER NAVY)	(Administrative Enforcement Action)
REGION HAWAII,)	
)	In the Matter of the Emergency Order Re:
850 Ticonderoga St., Suite 110JBPHH, Hawaii)	Change-In-Service and Defueling of 20
96860-5101,)	Underground Storage Tanks, Red Hill Bulk
)	Fuel Storage Facility
Respondent.)	
)	DEPARTMENT OF HEALTH'S
)	PREHEARING STATEMENT OF
)	POSITION

**DEPARTMENT OF HEALTH'S PREHEARING
STATEMENT OF POSITION**

The Department of Health ("Department") respectfully requests that this hearings officer affirm in totality the Emergency Order ("EO") in the above-captioned administrative enforcement action directing the United States Department of the Navy ("Navy") to immediately take those steps outlined in the EO, and any implement any other corrective action the hearings officer finds to be reasonable and justified based upon evidence adduced at the hearing in this matter, to protect the public health and environment from imminent peril. As will be

demonstrated more fully during the hearing, the authority to do so is found in section 342L-9, Hawaii Revised Statutes (HRS) and the imminent peril is defined as the risk of yet another release, of a magnitude and impact potentially far greater than previous ones, from an underground storage tank (“UST”) system (“UST system”) owned and operated by the Navy known as the Red Hill Bulk Fuel Storage Tanks and associated piping (the “Red Hill System”), that rests merely 100 feet above Oahu’s sole source aquifer and which the Department has determined to be inadequately protective of human health and the environment. The Department has exercised its enforcement authority, in accordance with its discretionary duty pursuant to statute, to protect our drinking water. The EO is justified by, and the record of this case clearly demonstrates, that:

I. The Red Hill System consists of steel tanks and piping that lie in a corrosive environment, that are in fact corroding, and are not being properly maintained.

The Red Hill System is known to be corroding, the condition of the associated piping is relatively unknown and neither tanks nor piping are winning the battle against time. The twenty (20) Red Hill USTs were first constructed in the early 1940’s and each have the capacity to store approximately 12.5-12.7 million gallons of petroleum product [D04, D05]. By various anecdotal accounts, they comprise the single largest fuel storage facility in the world. They were constructed out of ¼”, or quarter inch (0.25 inch), steel plates in a corrosive environment (basalt rock with water intrusion) and are known to be corroding at a yet-to-be fully determined rate [D07, D08]. The Navy has not regularly maintained these tanks and only recently, in compliance with the Tank Inspection Maintenance and Repair (“TIRM”) component of the Administrative Order on Consent in Department Docket No. 15-UST-EA-01, has the Navy begun in earnest to evaluate their maintenance procedures [D12, D13]. The process of identifying the corrosion involves the use of a two-step process (a preliminary electromagnetic scanning and

secondary/confirmatory ultrasonic imaging), to ascertain the condition of the steel plates inside the Red Hill USTs and identify for repair areas of unacceptably thinning steel (defined by the Navy as a threshold of 0.16” or 1/16 inch) [D07]. Once the area of unacceptable corrosion is identified, repairs are made by installing a new plate of steel which necessarily involves new welds and the opportunity for faulty workmanship [Note that the Navy publicly claims the 2014 release of 27,000 gals was caused by repairs, not preexisting defects]. This process of repair and maintenance is referred to by the Navy as their Clean, Inspect and Repair (“CIR”) cycle [D07]. Unfortunately, however, it has proven to be an unreliable method as the rate of detection accuracy, as measured by a correlation between projected steel thickness and actual measured thickness, is a mere sixty percent (60%) [D07, D08]. In the only real-world study of the accuracy of the Navy’s NDE (non-destructive examination) process, where ten (10) plates were scanned and then removed and physically inspected, only six (6) were accurately predicted to be in actual need of repair [Id.]. The condition of the piping directly associated with the Red Hill tanks is unknown because information, if any exists, related to the inspection of the associated piping has not been shared with the Department. Even if this process of maintaining the now almost 80 year old tanks was shown to be effective, which it has not, the Navy isn’t even maintaining its own maintenance schedule [D12, D13]. The Red Hill tanks and associated piping are not being properly, nor are they being timely, maintained [Id.]. The suspected cause of the most recent release, a pipeline connected to Red Hill USTs, for example, has yet to be repaired. The Navy has not demonstrated that it has the ability to properly maintain the Red Hill System, therefore, the corrective measures in the EO, including safe defueling, should be implemented expeditiously.

II. The Navy purposefully misunderstands the groundwater, and thus the risk posed to the drinking water.

The Navy has both failed to collect meaningful data and has ignored or misapplied the data it does have. The purpose of the Navy's work on groundwater modeling and the fate and transport of contaminants under red hill, submitted to the Department pursuant to the AOC, was to inform both the Navy and the Department of the risk to the aquifer. The Navy's failure to generate scientifically validated groundwater and contaminant migration models results in the Navy's failure also to appreciate the actual risk the Red Hill System presents to human health and the environment. The Navy's modeling has been deficient in that it:

- 1) Discounts and underestimates the potential impact of prior (historic) releases;
- 2) Drastically overestimates the holding capacity of the surrounding soil/rock formations;
- 3) Overestimates the rate of natural degradation of petroleum in both the groundwater itself and the soil/rock formations;
- 4) Assumes unrealistic direction and speed of flow which is contradicted by existing data; and
- 5) Significantly overestimates the effectiveness of a "capture zone" to allow for releases to be remediated by water treatment. Rather than obtain meaningful data from a tracer test (using harmless tracer "dye" to determine flow direction) or installing a more robust network of monitoring wells, the Navy has watched its capture zone theory disappear as the most recent release has left almost 100,000 persons without drinking water [D16, D17, D18, D19].

While its groundwater and fate and transport modeling is demonstrably invalid and unreliable, more worrisome from the perspective of whether the Navy can be trusted to operate the Red Hill System safely, is its refusal to acknowledge its flawed conclusions even after being encouraged to do so by the Department [D18, D19]. The Navy's refusal to correct course with respect to its modeling is a reflection of the Navy's more general refusal to accurately calculate the risk its Red Hill System poses to human health and the environment. Without proper groundwater modeling, the Navy remains unable to properly assess the risk to Oahu's aquifer. By relying upon models which do not accurately reflect the reality of the groundwater flow and the transportation of contaminants under Red Hill, and refusing to aggressively collect data that would fill gaps in the existing data (e.g. by performing a comprehensive series of tracer tests or installing more monitoring wells), it is entirely unsurprising that the Navy views the threat to human health and the environment differently than the Department. What was once an exercise in hypotheticals and wishful thinking has become a very painful reality as unambiguous evidence of petroleum in the groundwater, in the form of data collected in recent weeks as a result of the current water crisis, has supplied unmistakable evidence that the risk to human health and the environment is real and it is imminent.

Once petroleum has entered the environment, in this case the basalt (volcanic) rock underlying the Red Hill System it cannot be easily extracted or removed, therefore the Navy relies heavily on the notion that any releases will be captured and biologically degraded over time [D50]. The "pump and treat" method of groundwater remediation, where the contamination is embedded in a solid rock formation, has not been shown to be effective [Id.]. While the petroleum will degrade, the rate of degradation and the amount of contamination is uncertain [D17, D18, D20]. The Navy supports the presumption that any releases will be captured by the soil and rock under the Red Hill USTs and degraded over time, despite the fact that the

presumptions have been repeatedly challenged as unscientific, because the Navy steadfastly refuses to acknowledge the actual risk of harm [Id.]. The Navy in January 2018 estimated the holding capacity of the Red Hill rock formation to be 2,600,000 gallons of fuel, a number revised to 66,000 to 112,000 gallons in August 2021 [D22, D13]. Rather than acknowledge the imminent peril, the Navy would rather pretend that the Red Hill System can release fuel without actually impacting human health or the environment.

III. The recent releases draw a straight line from the tanks to the tap.

As demonstrated by the 2021 releases currently dislocating hundreds of military families, the environment and health of thousands of Oahu residents is in is in imminent peril because there can no longer be any doubt that releases from the Red Hill Tanks and piping directly impact drinking water. The Navy's current position is that only 38 gallons of fuel was released as the result of an over-pressurization incident on May 6, 2021 (reportedly involving the rupture of a pipeline connected to the Red Hill USTs) [D25]. The Navy estimates that because some 1,618 gallons of fuel was spilled and approximately 1,580 gallons were recovered, the release to the environment was only 38 gallons of fuel [Id.]. But this cannot be the full story. The levels of contamination at the Navy's red hill shaft and the impact on the Navy's own drinking water system experienced by its military and civilian customers suggest something far more. Whether the current level of contamination is the result of release of petroleum in greater quantities than reported by the Navy, the presence of other unreported spills of larger volumes, or the fact that recent releases have pushed old historic releases from the spaces they were previously occupying in the rock before the recent incidents, the Navy has no answer for what is happening now. As the operator of the Red Hill System, it's the Navy's responsibility to figure out the causation and adequately address the risk. In the absence of clear evidence that the Red Hill System is safe, the

Department's regulatory obligation is to order, among other things, the removal of fuel to eliminate the imminent peril.

IV. The peril is imminent.

Where a statute does not define a necessary term, a court customarily looks to the plain meaning of that term. Here, the term "imminent" as used in HRS § 342L-9 is not defined. While the word "imminent" as defined in lay dictionaries¹ tends to emphasize immediacy or nearness in time, in the environmental context an "imminent hazard" can, for example, be declared at any point in time in a chain of events which may ultimately result in harm to the public. See Env'tl. Def. Fund v. EPA, 465 F.2d 528, 535 (D.C. Cir. 1972); B.F. Goodrich Co. v. Murtha, 697 F.Supp. 89 (D. Conn. 1988) (an endangerment is imminent if the conditions that give rise to it are present even though the harm might not be realized for years); United States v. Conservation Chemical Co., 619 F.Supp. 162, 175 (W.D. Mo. 1985) (The mere threat of harm or potential harm to public health, public welfare, or the environment is sufficient).

In the context of drinking water contamination and leaks from storage tanks, courts clearly recognize that awaiting an actual harm is an absurdity and that imminent actual harm in the ordinary sense need not be proved. See 87th St. Owners Corp. v. Carnegie Hill-87th St. Corp., 251 F.Supp 1215 (S.D.N.Y. 2002) (involving a building owner suing to abate danger from subsurface oil allegedly leaking from a neighbor's storage tank); Trinity American Corp. v. U.S. E.P.A., 150 F.3d 389, 399 (4th Cir. 1998) (All the government must demonstrate is the

¹ From Merriam-Webster (<https://www.merriam-webster.com/dictionary/imminent>, emphasis added): *Imminent* bears a close resemblance to *eminent*, and native English-speakers can be excused if they sometimes have to check their spelling. No surprise, really, since the two, despite their very distinct meanings, come from near-identical sources. The Latin *minēre* means basically "to project, overhang," and it forms the root of other Latin words. One added the prefix *e-*, meaning "out from," to produce *eminēre*, "to stand out"; another took the prefix *im-*, meaning "upon," and became *imminēre*, "to project." The difference between "stand out" and "project" is obviously small. Still, even when *eminent* and *imminent* first appeared as English words in the 15th and 16th centuries respectively, they were clearly distinct in meaning, *imminent*'s prefix having strengthened the "overhang" sense of *minēre* **to give the word its frequent suggestion of looming threat.**

“imminent likelihood that the public may consume contaminated water unless prompt action is taken to prevent a potential hazard from occurring (internal citations omitted)); United States v. Northeastern Pharmaceutical and Chemical Co., 579 F. Supp. 823, 846 (W.D.Mo. 1984) (A relatively small quantity of hazardous substances that are toxic at low dosage levels are substantially likely to enter the groundwater and result in human and environmental exposure). It is a fundamental construct of environmental protection that government does not have to wait for catastrophic harm before taking regulatory action.

By analogy to how the United States Environmental Protection Agency (EPA) views its authority to act preemptively to prevent harm, especially relevant given that the Department’s UST Program is EPA-authorized, the regulatory power to protect against harm is rooted in common law nuisance (“Under the general doctrine of public nuisance the United States can seek to compel a responsible party to investigate the nature and extent of a hazardous condition, take remedial action to correct that condition, and pay the costs incurred by the government in investigating the problem and taking any remedial action.” [EPA guidance – “Guidelines for Using the Imminent Hazard, Enforcement and Emergency Response Authorities of Superfund and Other Statutes”; 47 Federal Register 93, at 20666]. The EPA further notes that “the Agency has, on a case-by-case basis, historically made a combined legal and scientific judgment in enforcement actions as to the appropriate extent of remedy, by consideration of a variety of generic and case specific factors. This has resulted in settlements and initial court decisions calling for remedial activity in individual circumstances ranging from complete elimination or removal of contaminants to nondetectable levels, to installation of containment and/or treatment alternatives in addition to or in lieu of rehabilitation of the contaminated environment.” [Id.]. Particularly where remediation is as complex as it would be at Red Hill, and the impact so great

(Oahu's sole-source aquifer and its only source of drinking water), the need to remove the threat of release by removal of the fuel is of paramount importance.

V. The EO is the appropriate legal mechanism to address the imminent peril.

The EO is narrowly-tailored to address the imminent peril and the risk to public health and the environment by targeting the source of that risk – the risk inherent in storing extremely large volumes of fuel in the questionable Red Hill Tanks and piping directly above Oahu's aquifer without a reasonable assurance that doing so is protective of human health and the environment. The EO requires only that the Navy properly evaluate the Facility's obvious deficiencies and to safely defuel the Red Hill Tanks and piping until that process is complete. Years of assurances by the Navy that our water is safe are no longer persuasive. More needs to be done and the EO asks only that it be done now before it is too late.

DATED: Honolulu, Hawai'i, December 18, 2021.

/s/ Wade H. Hargrove III
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