

Comments received by Department of Health, Solid and Hazardous Waste Branch on the May 28, 2019 draft permit for an underground storage tank (UST) system operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor at Red Hill-Aiea and Joint Base Pearl Harbor-Hickam, Hawaii.

The public comment period closed on June 28, 2019. Most comments were received via e-mail. Addresses and phone numbers of commenters contained in e-mails have been removed.

No.	Comment
1	<p>As the tanks are near our water resources, we do not think it is good planning and feel there should be another way to store fuel above ground, on one of the bases. The risk is just too great.</p> <p>Thank you for listening Nancy and Errol Rubin</p>
2	<p>To whom it may concern</p> <p>The goal should be to replace the existing storage tanks in Red Hill because they pose a hazard to our water supply and repair proposals are inadequate. The navy has had enough time to come up with a solution, and it is obvious that the proposals so far are not adequate and would be a waste of money. So i think it would be logical to find a new location other than the one above our water supply with attention to the eventuality of leaks and their consequences. This should be with new tanks with best in industry design and construction.</p> <p>i appreciate this opportunity to express my opinion. i am no engineer, but am a retired physician. i think common sense and good judgment should prevail.</p> <p>Sincerely Lansdale Lau, M.D.</p>
3	<p>Aloha,</p> <p>The US military is a major polluter, they show little regard for the health of the American people or the environment. There are really any repercussions for their environmental damage. I want the tanks shut down and removed. The island's drinking water is more important than the Navy's fuel. If destroying the planet and making the earth uninhabitable is the way the military's way of making us safe I would rather take my chances on giving peace a chance.</p> <p>Mahalo, Harvey Arkin Manoa, HI</p> <p><b>US Department of Defense is the Worst Polluter on the Planet</b></p> <p>October 2, 2010</p> <p>The US military is responsible for the most egregious and widespread pollution of the planet, yet this information and accompanying documentation goes almost entirely unreported. In spite of the evidence, the environmental impact of the US military goes largely unaddressed by environmental organizations and was not the focus of any discussions or proposed restrictions at the recent UN Climate Change Conference in Copenhagen. This impact includes uninhibited use of fossil fuels, massive creation of greenhouse gases, and extensive release of radioactive and chemical contaminants into the air, water, and soil.</p>

**Student Researchers:**

- Dimitrina Semova, Joan Pedro, and Luis Luján (Complutense University of Madrid)
- Ashley Jackson-Lesti, Ryan Stevens, Chris Marten, and Kristy Nelson (Sonoma State University)
- Christopher Lue (Indian River State College)
- Cassie Barthel (St. Cloud State University)

**Faculty Evaluators:**

- Ana I. Segovia (Complutense University of Madrid)
- Julie Flohr and Mryna Goodman (Sonoma State University)
- Elliot D. Cohen (Indian River State College)
- Julie Andrzejewski (St. Cloud State University)

The extensive global operations of the US military (wars, interventions, and secret operations on over one thousand bases around the world and six thousand facilities in the United States) are not counted against US greenhouse gas limits. Sara Flounders writes, “By every measure, the Pentagon is the largest institutional user of petroleum products and energy in general. Yet the Pentagon has a blanket exemption in all international climate agreements.”

While official accounts put US military usage at 320,000 barrels of oil a day, that does not include fuel consumed by contractors, in leased or private facilities, or in the production of weapons. The US military is a major contributor of carbon dioxide, a greenhouse gas that most scientists believe is to blame for climate change. Steve Kretzmann, director of Oil Change International, reports, “The Iraq war was responsible for at least 141 million metric tons of carbon dioxide equivalent (MMTCO<sub>2e</sub>) from March 2003 through December 2007. . . . That war emits more than 60 percent that of all countries. . . . This information is not readily available . . . because military emissions abroad are exempt from national reporting requirements under US law and the UN Framework Convention on Climate Change.”

According to Barry Sanders, author of *The Green Zone: The Environmental Costs of Militarism*, “the greatest single assault on the environment, on all of us around the globe, comes from one agency . . . the Armed Forces of the United States.”

Throughout the long history of military preparations, actions, and wars, the US military has not been held responsible for the effects of its activities upon environments, peoples, or animals. During the Kyoto Accords negotiations in December 1997, the US demanded as a provision of signing that any and all of its military operations worldwide, including operations in participation with the UN and NATO, be exempted from measurement or reductions. After attaining this concession, the Bush administration then refused to sign the accords and the US Congress passed an explicit provision guaranteeing the US military exemption from any energy reduction or measurement.

Environmental journalist Johanna Peace reports that military activities will continue to be exempt based on an executive order signed by President Barack Obama that calls for other federal agencies to reduce

their greenhouse gas emissions by 2020. Peace states, "The military accounts for a full 80 percent of the federal government's energy demand."

As it stands, the Department of Defense is the largest polluter in the world, producing more hazardous waste than the five largest US chemical companies combined. Depleted uranium, petroleum, oil, pesticides, defoliant agents such as Agent Orange, and lead, along with vast amounts of radiation from weaponry produced, tested, and used, are just some of the pollutants with which the US military is contaminating the environment. Flounders identifies key examples:

- Depleted uranium: Tens of thousands of pounds of microparticles of radioactive and highly toxic waste contaminate the Middle East, Central Asia, and the Balkans.

- US-made land mines and cluster bombs spread over wide areas of Africa, Asia, Latin America, and the Middle East continue to spread death and destruction even after wars have ceased.

- Thirty-five years after the Vietnam War, dioxin contamination is three hundred to four hundred times higher than "safe" levels, resulting in severe birth defects and cancers into the third generation of those affected.

- US military policies and wars in Iraq have created severe desertification of 90 percent of the land, changing Iraq from a food exporter into a country that imports 80 percent of its food.

- In the US, military bases top the Superfund list of the most polluted places, as perchlorate and trichloroethylene seep into the drinking water, aquifers, and soil.

- Nuclear weapons testing in the American Southwest and the South Pacific Islands has contaminated millions of acres of land and water with radiation, while uranium tailings defile Navajo reservations.

- Rusting barrels of chemicals and solvents and millions of rounds of ammunition are criminally abandoned by the Pentagon in bases around the world.

The United States is planning an enormous \$15 billion military buildup on the Pacific island of Guam. The project would turn the thirty-mile-long island into a major hub for US military operations in the Pacific. It has been described as the largest military buildup in recent history and could bring as many as fifty thousand people to the tiny island. Chamoru civil rights attorney Julian Aguon warns that this military operation will bring irreversible social and environmental consequences to Guam. As an unincorporated territory, or colony, and of the US, the people of Guam have no right to self-determination, and no governmental means to oppose an unpopular and destructive occupation.

Between 1946 and 1958, the US dropped more than sixty nuclear weapons on the people of the Marshall Islands. The Chamoru people of Guam, being so close and downwind, still experience an alarmingly high rate of related cancer.

On Capitol Hill, the conversation has been restricted to whether the jobs expected from the military construction should go to mainland Americans, foreign workers, or Guam residents. But we rarely hear the voices and concerns of the indigenous people of Guam, who constitute over a third of the island's population.

Meanwhile, as if the US military has not contaminated enough of the world already, a new five-year strategic plan by the US Navy outlines the militarization of the Arctic to defend national security, potential undersea riches, and other maritime interests, anticipating the frozen Arctic Ocean to be open waters by the year 2030. This plan strategizes expanding fleet operations, resource development, research, and tourism, and could possibly reshape global transportation.

While the plan discusses "strong partnerships" with other nations (Canada, Norway, Denmark, and Russia have also made substantial investments in Arctic-capable military armaments), it is quite evident that the US is serious about increasing its military presence and naval combat capabilities. The US, in addition to planned naval rearmament, is stationing thirty-six F-22 Raptor stealth fighter jets, which is 20 percent of the F-22 fleet, in Anchorage, Alaska.

Some of the action items in the US Navy Arctic Roadmap document include:

- Assessing current and required capability to execute undersea warfare, expeditionary warfare, strike warfare, strategic sealift, and regional security cooperation.
- Assessing current and predicted threats in order to determine the most dangerous and most likely threats in the Arctic region in 2010, 2015, and 2025.
- Focusing on threats to US national security, although threats to maritime safety and security may also be considered.

Behind the public façade of international Arctic cooperation, Rob Heubert, associate director at the Centre for Military and Strategic Studies at the University of Calgary, points out, "If you read the document carefully you'll see a dual language, one where they're saying, 'We've got to start working together' . . . and [then] they start saying, 'We have to get new instrumentation for our combat officers.' . . . They're clearly understanding that the future is not nearly as nice as what all the public policy statements say."

Beyond the concerns about human conflicts in the Arctic, the consequences of militarization on the Arctic environment are not even being considered. Given the record of environmental devastation that the US military has wrought, such a silence is unacceptable.

#### **Update by Mickey Z.**

As I sit here, typing this "update," the predator drones are still flying over Afghanistan, Iraq, and Pakistan, the oil is still gushing into the Gulf of Mexico, and 53.3 percent of our tax money is still being

funneled to the US military. Simply put, hope and change feels no different from shock and awe . . . but the mainstream media continues to propagate the two-party lie.

Linking the antiwar and environmental movements is a much-needed step. As Cindy Sheehan recently told me, “I think one of the best things that we can do is look into economic conversion of the defense industry into green industries, working on sustainable and renewable forms of energy, and/or connect[ing] with indigenous people who are trying to reclaim their lands from the pollution of the military industrial complex. The best thing to do would be to start on a very local level to reclaim a planet healthy for life.”

It comes down to recognizing the connections, recognizing how we are manipulated into supporting wars and how those wars are killing our ecosystem. We must also recognize our connection to the natural world. For if we were to view all living things, including ourselves, as part of one collective soul, how could we not defend that collective soul by any means necessary?

We are on the brink of economic, social, and environmental collapse. In other words, this is the best time ever to be an activist.

#### **Update by Julian Aguon**

In 2010, the people of Guam are bracing themselves for a cataclysmic round of militarization with virtually no parallel in recent history. Set to formally begin this year, the military buildup comes on the heels of a decision by the United States to aggrandize its military posture in the Asia-Pacific region. At the center of the US military realignment schema is the hotly contested agreement between the United States and Japan to relocate thousands of US Marines from Okinawa to Guam. This portentous development, which is linked to the United States’ perception of China as a security threat, bodes great harm to the people and environment of Guam yet remains virtually unknown to Americans and the rest of the international community.

What is happening in Guam is inherently interesting because while America trots its soldiers and its citizenry off to war to the tune of “spreading democracy” in its own proverbial backyard, an entire civilization of so-called “Americans” watch with bated breath as people thousands of miles away—people we cannot vote for—make decisions for us at ethnocidal costs. Although this military buildup marks the most volatile demographic change in recent Guam history, the people of Guam have never had an opportunity to meaningfully participate in any discussion about the buildup. To date, the scant coverage of the military buildup has centered almost exclusively around the United States and Japan. In fact, the story entitled “Guam Residents Organize Against US Plans for \$15B Military Buildup on Pacific Island” on *Democracy Now!* was the first bona fide US media coverage of the military buildup since 2005 to consider, let alone privilege, the people’s opposition.

The heart of this story is not so much in the finer details of the military buildup as it is in the larger political context of real-life twenty-first-century colonialism. Under US domestic law, Guam is an unincorporated territory. What this means is that Guam is a territory that belongs to the United States but is not a part of it. As an unincorporated territory, the US Constitution does not necessarily or

automatically apply in Guam. Instead, the US Congress has broad powers over the unincorporated territories, including the power to choose what portions of the Constitution apply to them. In reality, Guam remains under the purview of the Office of Insular Affairs in the US Department of the Interior.

Under international law, Guam is a non-self-governing territory, or UN-recognized colony whose people have yet to exercise the fundamental right to self-determination. Article 73 of the United Nations Charter, which addresses the rights of peoples in non-self-governing territories, commands states administering them to “recognize the principle that the interests of the inhabitants are paramount.” These “administering powers” accept as a “sacred trust” the obligation to develop self-government in the territories, taking due account of the political aspirations of the people. As a matter of international treaty and customary law, the colonized people of Guam have a right to self-determination under international law that the United States, at least in theory, recognizes.

The military buildup, however, reveals the United States’ failure to fulfill its international legal mandate. This is particularly troubling in light of the fact that this very year, 2010, marks the formal conclusion of not one but two UN-designated international decades for the eradication of colonialism. In 1990, the UN General Assembly proclaimed 1990–2000 as the International Decade for the Eradication of Colonialism. To this end, the General Assembly adopted a detailed plan of action to expedite the unqualified end of all forms of colonialism. In 2001, citing a wholesale lack of progress during the first decade, the General Assembly proclaimed a second one to effect the same goal. The second decade has come and all but gone with only Timor-Leste, or East Timor, managing to attain independence from Indonesia in 2002.

In November 2009—one month after “Guam Residents Organize Against US Plans for \$15B Military Buildup on Pacific Island” aired—the US Department of Defense released an unprecedented 11,000-page Draft Environmental Impact Statement (DEIS), detailing for the first time the true enormity of the contemplated militarization of Guam. At its peak, the military buildup will bring more than 80,000 new residents to Guam, which includes more than 8,600 US Marines and their 9,000 dependents; 7,000 so-called transient US Navy personnel; 600 to 1,000 US Army personnel; and 20,000 foreign workers on military construction contracts. This “human tsunami,” as it is being called, represents a roughly 47 percent increase in Guam’s total population in a four-to-six-year window. Today, the total population of Guam is roughly 178,000 people, the indigenous Chamoru people making up only 37 percent of that number. We are looking at a volatile and virtually overnight demographic change in the makeup of the island that even the US military admits will result in the political dispossession of the Chamoru people. To put the pace of this ethnocide in context, just prior to World War II, Chamorus comprised more than 90 percent of Guam’s population.

At the center of the buildup are three major proposed actions: 1) the construction of permanent facilities and infrastructure to support the full spectrum of warfare training for the thousands of relocated Marines; 2) the construction of a new deep-draft wharf in the island’s only harbor to provide for the passage of nuclear-powered aircraft carriers; and 3) the construction of an Army Missile Defense Task Force modeled on the Marshall Islands–based Ronald Reagan Ballistic Missile Defense Test Site, for the practice of intercepting intercontinental ballistic missiles.

In terms of adverse impact, these developments will mean, among other things, the clearing of whole limestone forests and the desecration of burial sites some 3,500 years old; the restricting of access to areas rich in plants necessary for indigenous medicinal practice; the denying of access to places of worship and traditional fishing grounds; the destroying of seventy acres of thriving coral reef, which currently serve as critical habitat for several endangered species; and the over-tapping of Guam's water system to include the drilling of twenty-two additional wells. In addition, the likelihood of military-related accidents will greatly increase. Seven crashes occurred during military training from August 2007 to July 2008, the most recent of which involved a crash of a B-52 bomber that killed the entire crew. The increased presence of US military forces in Guam also increases the island's visibility as a target for enemies of the United States.

Finally, an issue that has sparked some of the sharpest debate in Guam has been the Department of Defense's announcement that it will, if needed, forcibly condemn an additional 2,200 acres of land in Guam to support the construction of new military facilities. This potential new land grab has been met with mounting protest by island residents, mainly due to the fact that the US military already owns close to one-third of the small island, the majority of which was illegally taken after World War II.

In February 2010, upon review of the DEIS, the US Environmental Protection Agency (EPA) rated it "insufficient" and "environmentally unsatisfactory," giving it the lowest possible rating for a DEIS. Among other things, the EPA's findings suggest that Guam's water infrastructure cannot handle the population boom and that the island's fresh water resources will be at high risk for contamination. The EPA predicts that without infrastructural upgrades to the water system, the population outside the bases will experience a 13.1 million gallons of water shortage per day in 2014. The agency stated that the Pentagon's massive buildup plans for Guam "should not proceed as proposed." The people of Guam were given a mere ninety days to read through the voluminous 11,000-page document and make comments about its contents. The ninety-day comment period ended on February 17, 2010. The final EIS is scheduled for release in August 2010, with the record of decision to follow immediately thereafter.

The response to this story from the mainstream US media has been deafening silence. Since the military buildup was first announced in 2005, it was more than three years before any US media outlet picked up on the story. In fact, the October 2009 *Democracy Now!* interview was the first substantive national news coverage of the military buildup.

**Sources:**

Sara Flounders, "Add Climate Havoc to War Crimes: Pentagon's Role in Global Catastrophe," International Action Center, December 18, 2009, [http://www.iacenter.org/o/world/climatesummit\\_pentagon121809](http://www.iacenter.org/o/world/climatesummit_pentagon121809).

Mickey Z., "Can You Identify the Worst Polluter on the Planet? Here's a Hint: Shock and Awe," *Planet Green*, August 10, 2009, <http://planetgreen.discovery.com/tech-transport/identify-worst-polluter-planet.html>.

Julian Aguon, "Guam Residents Organize Against US Plans for \$15B Military Buildup on Pacific Island," *Democracy Now!*, October 9, 2009, [http://www.democracynow.org/2009/10/9/guam\\_residents\\_organize\\_against\\_us\\_plans](http://www.democracynow.org/2009/10/9/guam_residents_organize_against_us_plans).

Ian Macleod, "U.S. Plots Arctic Push," *Ottawa Citizen*, November 28, 2009, <http://www.ottawacitizen.com/technology/navy+plots+Arctic+push/2278324/story.html>.

Nick Turse, "Vietnam Still in Shambles after American War," *In These Times*, May 2009, [http://www.inthesetimes.com/article/4363/casualties\\_continue\\_in\\_vietnam](http://www.inthesetimes.com/article/4363/casualties_continue_in_vietnam).

Jalal Ghazi, "Cancer—The Deadly Legacy of the Invasion of Iraq," *New America Media*, January 6, 2010, [http://news.newamericamedia.org/news/view\\_article.html?article\\_id=80e260b3839daf2084fdeb0965ad31ab](http://news.newamericamedia.org/news/view_article.html?article_id=80e260b3839daf2084fdeb0965ad31ab).

**For more information on the military buildup:**

- We Are Guahan, <http://www.weareguahan.com>
- Draft Environmental Impact Study Guam & Commonwealth of the Northern Mariana Islands Military Relocation, [www.guambuildupeis.us](http://www.guambuildupeis.us)
- Center for Biological Diversity Response to DEIS, [www.biologicaldiversity.org/news/center/articles/2010/los-angeles-times-02-24-2010.html](http://www.biologicaldiversity.org/news/center/articles/2010/los-angeles-times-02-24-2010.html)
- EPA Response to Guam DEIS, [www.stripes.com/article.asp?section=104&article=68298](http://www.stripes.com/article.asp?section=104&article=68298)

**For more information on Guam's movement to resist militarization and unresolved colonialism:**

- The Guahan Coalition for Peace and Justice: Lisa Linda Natividad, [lisanati\[at\]yahoo.com](mailto:lisanati@yahoo.com); Hope Cristobal, [ecris64\[at\]teleguam.net](mailto:ecris64@teleguam.net); Julian Aguon, [julianaguon\[at\]gmail.com](mailto:julianaguon@gmail.com); Michael Lujan Bevacqua, [mlbasquiat\[at\]hotmail.com](mailto:mlbasquiat@hotmail.com); Victoria-Lola Leon Guerrero, [victoria.lola\[at\]gmail.com](mailto:victoria.lola@gmail.com)
- We Are Guahan—We Are Guahan Public Forum: [www.weareguahan.com](http://www.weareguahan.com)
- Famoksaiyan: Martha Duenas, [martduenas\[at\]yahoo.com](mailto:martduenas@yahoo.com); <http://famoksaiyanwc.wordpress.com>

4 The Red Hill Fuel tanks are a danger to our water supply and should be shut down as soon as possible. As soon as possible does not mean 10 years from now. Once the aquifer is polluted, there is no other source for water. I strongly oppose approving a permit.  
Avis Lam

5 Aloha DOH  
Those tanks must be reinforced to be able to withstand sea level rise and salt water intrusion. They should not only be made considerably thicker, but they should also have a corrosion resistant interior. Plastic should do, as it would be more or less compatible with the fuel.  
We had to comply with environmental regulations on base, so I don't see why the DoD can't. They can use the money their outlandish contractors want for their CEO retirement.  
Mahalo,  
Dave Kisor: Veteran Aviation Electrician USN / USNR; Geographer; retired USFS research tech; Cat Servant

Dear Hawai'i Department of Health Solid and Hazardous Waste Branch,  
I am writing today to offer comments on the U.S. Navy's permit application for the operation of the Red Hill Bulk Fuel Storage Facility. My ultimate concern is the protection of O'ahu's primary drinking water resource—the resource that I depend upon for my livelihood.

Back in 1969, a 200 foot increase in sea level was expected if the Antarctic and Greenland ice were to melt. In 2002, this was updated to 220 feet. How long will it take for the salt water wedge to begin saturating the cement through cracks that will form? Quite possibly one and a half to two decades. When Hickam and Pearl are underwater at high tide, what will you do about the tanks? Entire islands are being evacuated, and as long as the denial gang remains in power, it'll continue.

If I were in command of the World's Largest Nuclear Powered Janitorial Service, I'd invest in tankers instead of a fixed location that may soon be impacted by a serious rise in sea level. This suggestion will be dismissed until a last ditch maneuver is needed. Ice melts slowly at first, but once it begins, you'll be hard pressed to slow it down, let alone stop it. Keeping your tanks there may indeed become an exercise in futility sooner than you think. Remember one thing. Anti skid brakes do not work on a submerged runway!

Thank you very much for the opportunity to provide comments on this extremely important issue.  
Sincerely,  
Dave Kisor  
Pahoa, HI 96778

Aloha DoH, USN and any other abbreviations  
Owing to an eventual 220 foot rise in sea level, placing those tanks there would be a hideous error in judgment. As long as the petroleum industry and the US Government denying climate change, the rise is something you can count on to happen. By all rights, this slight climate change shouldn't be happening for about 25,000 years, but thanks to a change in climate which allowed way too much CH4 (methane) into the atmosphere, we've set future generations up for an interesting time. Consider the salt water wedge that will rise up and corrode the tanks. Subterranean geological conditions will be different and it will probably happen long before the full 220 foot rise. You'll ignore this, but after a while, current air and sea ports will become unusable and it is a good time to consider sea plane ports once again. If this is a repeat, C'esspool la vie!

Mahalo,  
Dave Kisor: Veteran USN / USNR; Geographer; Retired USFS research tech

6 Dear Hawai'i Department of Health Solid and Hazardous Waste Branch,  
I am writing today to offer comments on the U.S. Navy's permit application for the operation of the Red Hill Bulk Fuel Storage Facility. My ultimate concern is the protection of O'ahu's primary drinking water resource—the resource that I depend upon for my livelihood.

The tanks at the Red Hill facility, which store upwards of 225 million gallons of fuel, sit immediately above an aquifer that serves over one-third of O'ahu's population. The potential impact of these tanks

on the people and environment of O‘ahu is tremendous and therefore should be considered with great concern.

#### No Leak is Acceptable

As this permit stands now, leaks of various sizes do not require action. Please explain what the permissible leak rate is and the reasoning behind this level. With the vital location of these tanks and the volume of fuel stored at Red Hill, no amount of released fuel should be permitted. Is it possible for additional restrictions to be put in place for the Red Hill tanks due to the fact that existing fuel releases from the facility have failed to be located or cleaned up?

The permit also requires the owner/operator of the tanks to demonstrate financial responsibility for tank releases and compensate third parties for bodily injury and property damage. How will DOH ensure that the Navy will be held financially responsible for tank releases? The U.S. Navy has stated before that in the case of a release that contaminates the aquifer, they will work with the Honolulu Board of Water Supply and fund carbon filters to remove released fuel from drinking water. However, a comprehensive plan on how the Navy might deploy such resources has never been released. Additionally, these carbon filters would only be applicable for drinking water—they do not protect the surrounding environment from harm. The U.S. Navy should be held responsible for any environmental impact caused by a release of fuel.

In Enclosure 7 of the permit, it is concluded that three sections of pipelines passed the 2019 annual static liquid pressure testing but four sections were not tested. What is the reasoning behind not testing the full system of pipelines?

#### Special Conditions

The tanks at Red Hill are unlike any other by size, structure, and location. While this permit offers some special conditions related to these factors, this facility should be held to higher standards. The permit requires that releases due to corrosion are prevented—how does the Navy satisfy the permit requirement if they do not undergo any corrosion prevention practices? It is made clear from the coupons sampled during the 2018 Destructive Analysis that corrosion is occurring on all areas of the tanks.

The tanks at Red Hill have already released thousands of gallons of fuel into the environment. More release detection practices should be enforced at this facility. The permit application offers nine other methods of release detection—the Department of Health should require an explanation from the U.S. Navy on the reason that these other practices cannot be implemented at Red Hill.

#### Public Concern & Transparency

The Red Hill facility has the potential to impact over 400,000 residents and visitors on O‘ahu. Impacted residents and stakeholders should be well informed of the status of this facility. Before consideration of this permit application for approval, the Department of Health should hold a public hearing to provide the community the opportunity to hear updates and stipulations of this permit and have their questions and concerns addressed. Much of this permit application is redacted—it is difficult to feel confident that our drinking water is secure when much of a public document is missing. Furthermore, the Department

of Health should require the mandated annual status update reports in this permit be released to the public in a timely matter.

Thank you very much for the opportunity to provide comments on this extremely important issue.

Sincerely,

Cindy Aban

Jan Adam

Lori Adolweski

Laura Alskog

Kaliko Amona

Bobbie Best

Patricia Blair

Robyn Blaisdell

Jonathan Boyne

Maryann Broyles

Cheryl Burghardt

Ervin Bush Jr

Nenita Cabanilla

Stephen Canham

Randy Ching

Glenn Choy

Craig Clark

Lyle Cook

Michael deYcaza

Taylor Engle

Donald Erway

Anthony Fink

Sandra Fujita

Larry Ginds

Lewis Glenn

Laura Gray

Regina Gregory

Wendy Green

Korynn Grenert

Christine Hansen

Mary Harbold

Pua Heimuli

Kasha Ho

Trevor Howard

Aaron Isgar

Andrew Isoda

Sandy J

Diana King

Helene Lileikis

	<p>Nanea Lo  Denise Lytle  James Marcus  Rick Masterson  B.A. McClintock  Sean McNamara  Javier Mendez  Rosalind Modica  Cathy Mullen  Michele Nihipali  Barbara Nosaka  Dennis O’Shea  Brooks Obr  Lory Ono  V Pahia  David Pearson  Tia Pearson  Marisa Plemer  Sherry Pollack  Gregory Puppione  Shannon Rudolph  Katarina Ruiz  Namphuong Quach  Mamoru Sato  Steven Seifried  William Sharfman  Kathy Shimata  Jun Shin  John &amp; Rita Shockley  Joe Simmons  Daniel Speraw  John Stephens  Tlaloc Tokuda  L Tomita  Wayne Tong  Momi Vee  Eric Voorhies  Linda Wong  Louise Zovanyi</p>
7	<p>It's clear that the U.S. Navy should not have a permit for the operation of the Red Hill Bulk Fuel Storage Facility.  [comment 6]</p>

	<p>janice palma-glennie Kailua Kona, HI 96745</p>
8	<p>Dear Hawai'i Department of Health Solid and Hazardous Waste Branch, Permitting should include documentation of all previous leaks. There have been inconsistent reports from Navy as to whether prior leaks have occurred. Report should include date, amount, location, size and any repairs taken.</p> <p>We should request that only those tanks currently in operation be permitted and those that are not in use not be allowed to be put back in to service.</p> <p>Leak detection procedures should be documented with time to respond to leak parameters put in place. Fines for not adequately addressing leaks within a certain time frame.</p> <p>We should evaluate existing contamination of ground water beneath tanks and clean up efforts start underneath tanks that have been shutdown. This would allow us to understand what it will take to clean up site.</p> <p>These tanks would not be permitted today if being newly built. The permit should be temporary and issued as conditional on tanks being relocated to above ground storage elsewhere. Furthermore, permit should require existing AOC should be constrained to only offer legal solution for tank upgrade solutions, that is double lined tanks.</p> <p>Permit should require that Navy adequately document their operational fuel needs versus what is a stockpile for some future scenario? What is worth destroying our clean water for? Current bomb technology can reach these tanks so they are no longer as useful as they were when designed. Navy should demonstrate good faith by taking stockpile tanks offline.</p> <p>Permit should request high level review by Navy, Secretary of State as to justify continuation of Red Hill tanks.</p> <p>Corrosion rate should be calculated to figure out lifetime of existing tanks and whether these tanks lifespan is much shorter than five years.</p> <p>Thank you very much for the opportunity to provide comments on this extremely important issue.</p> <p>Sincerely, Alison Bhattacharyya Honolulu, HI 96817</p>
9	<p>Dear Hawai'i Department of Health Solid and Hazardous Waste Branch, Aloha.</p> <p>I am writing today about the Navy's permit application for the operation of the Red Hill Bulk Fuel storage facility.</p>

	<p>The tanks store over 220 million gallons of fuel, and sit on top of an aquifer that serves over one-third of O’ahu’s population. The potential impact of these tanks on the people and the environment of O’ahu is tremendous and therefore should be considered with concern.</p> <p>Acceptable leakage? Please explain what the permissible leak rate is and the reasoning behind this level. With the vital location of these tanks and the volume of fuel stored at Red Hill, no amount of released fuel should be allowed. It is my understanding that ongoing leaks have not been cleaned up. This would indicate leaked fuel may enter the aquifer at some point in the future, if it has not already.</p> <p>A comprehensive plan needs to state exactly how the Navy will be held financially responsible for future toxic fuel releases into the aquifer not only for drinking water but for the surrounding environment as well.</p> <p>In Enclosure 7 of the permit, it is concluded that four pipeline sections were not tested in the 2019 annual static liquid pressure testing. What is the reasoning behind not testing the full system?</p> <p>It is made clear from the coupons sampled during the 2018 Destructive Analysis that corrosion is occurring on all areas of the tanks.</p> <p>The tanks at Red Hill have already released thousands of gallons of fuel into the environment. More release detection practices should be enforced at this facility. The permit application offers nine other methods of release detection—the Department of Health should require an explanation from the U.S. Navy on the reason that these other practices cannot be implemented at Red Hill.</p> <p>The Red Hill facility has the potential to impact over 400,000 people on O’ahu. The Department of Health should hold a public hearing to address questions and concerns.</p> <p>Why is so much of this permit application redacted? How can we feel confident that our drinking water is secure when much of a public document is missing?</p> <p>The Department of Health should require the mandated annual status update reports in this permit be released to the public in a timely manner and without redactions.</p> <p>I appreciate the opportunity to provide comments on this extremely important issue.  Mahalo,  Valerie Weiss  Kapaa HI 96746</p>
10	<p>[comment 6]  HELE, the company in Hawaii that manufactures gas had a proposal that the Navy reject. I believe that proposal it should be reconsidered.  Cullen Hayashida</p>
11	<p>Aloha Hawai’i Department of Health Solid and Hazardous Waste Branch,</p>

	<p>I wish to comment on the Navy's permit application for the Red Hill fuel facility.</p> <p>I have read the Sierra Club comments below in their entirety and fully endorse them. They express my views more eloquently, and certainly more diplomatically, than I would.</p> <p>I believe that it would be <b>INSANE</b> to permit the Navy's massive fuel reserve to continue to sit atop our most important aquifer. You <b>MUST</b> develop regulations that will force the Navy to move the tanks. In the meantime these proposed regulations are a step in the right direction, but they <b>DO NOT GO FAR ENOUGH</b>.</p> <p>[comment 6] Anthony B Aalto</p>
12	<p>Dear Hawai'i Department of Health Solid and Hazardous Waste Branch, "Woulda, coulda, shoulda" - - three words that I hope to never hear our elected and appointed government officials say after a catastrophic leak from any field-constructed underground storage tank in Hawaii.</p> <p>The 20 old, rusting, deteriorating, single-walled tanks inside Red Hill that can store 225 million gallons of jet fuel a mere 100 feet above the primary source of water for hundreds of thousands of Oahu's citizens and tourists present a life-threatening risk.</p> <p>The tanks are more eroded than anyone thought.</p> <p>They must be emptied and retired urgently.</p> <p>They do not need the Navy's BAND-AID over a GAPING WOUND.</p> <p>The Navy has an ulterior motive to delay doing the right thing, and to insist on doing the easiest repairs; and it has nothing to do with the health and water safety of the citizens of O'ahu - - it all boils down to money.</p> <p>Please make it impossible for residents, tourists, the nation, and the world to ever hear, 'woulda, coulda, shoulda' in the same sentence with Red Hill.</p> <p>Sincerely, Kim Jorgensen Honolulu, HI 96815</p>
13	<p>Dear Hawai'i Department of Health Solid and Hazardous Waste Branch, Please follow the Sierra Club's recommendations regarding conditions of the permit and rules.</p> <p>Preventing a catastrophic crisis is a lot easier than eventually dealing with one - - easier on humans; easier on wildlife; and easier on the environment.</p> <p>1989 saw the Exxon Valdez disaster in Alaska, the body of water was the Prince William Sound</p> <ul style="list-style-type: none"> <li>• 11 million gallons of oil contaminated 1,300 miles of coastline</li> </ul>

	<ul style="list-style-type: none"> <li>• It was caused by human error</li> </ul> <p>2010 saw the Deepwater Horizon disaster in Louisiana, the body of water was the Gulf of Mexico</p> <ul style="list-style-type: none"> <li>• Approximately 210 million gallons of oil were discharged</li> <li>• It was caused by 5 key human errors, and 1 colossal mechanical error</li> </ul> <p>Red Hill, Hawaii; the body of water is O’ahu’s primary sole-source aquifer Which year could become equally as famous is anyone’s guess:</p> <ul style="list-style-type: none"> <li>• 2020?</li> <li>• 2025?</li> <li>• It could even be 2019</li> </ul> <p>They say hindsight is 20/20</p> <ul style="list-style-type: none"> <li>• It was human error to install the tanks on top of the aquifer in the 1940s</li> <li>• And it will definitely be human error to believe the Navy when they say that every square inch of these gigantic, old and rusting, single-layer tanks filled with jet fuel pushing against their fragile sides can be meticulously monitored and safely repaired with metal Band-Aids</li> </ul> <p>The tanks have served their purpose - - - and overstayed their welcome.</p> <p>They must be emptied and retired before disaster strikes the main body of drinking water that hundreds of thousands of residents and tourists depend upon every single day.</p> <p>Please protect us and our water so Honolulu does not become the next Flint, Michigan.</p> <p>Thank you very much for your consideration. Sincerely, Denise Boisvert Honolulu, HI 96815</p>
14	<p>Dear Hawai’i Department of Health Solid and Hazardous Waste Branch, The Corroding Red Hill storage tanks are a dire threat to my families and thousands of families throughout Oahu. This is a problem which should have been dealt with years ago and is a symbol of governmental neglect. The permit process is an opportunity to require the Navy to make changes which will insure the safety of the tanks, but the ultimate response is to dismantle the storage tanks and relocate them to another site where they will not threaten our water supply. This should be an immediate priority. Noel Kent Professor UH Manoa</p>
15	<p>Dear Hawai’i Department of Health Solid and Hazardous Waste Branch, Requiring the Navy to abide by a permit to operate the tanks at Red Hill is a step in the right direction, but considering that these tanks put our drinking water at risk - my drinking water and that of thousands of other residents - the Navy MUST relocate the tanks.</p> <p>The Navy has been making excuses as to why it does not need to spend money to relocate or refurbish the tanks to the specifications the Board of Water has concluded is necessary to protect our drinking</p>

water, saying the thickness of the tank walls is not an issue of concern (even though tests, reported in the news, have found that the state of the walls is alarming), all the while claiming that it considers the safety of our water a priority. This is bullshit. Normally, I would utilize a word more appropriate for official comments to a state department, but I feel it is necessary to state the issue as plainly as possible.

These tanks are old. They are worn, their walls are thin, and they continue to wear. Shall we wait until a natural disaster or further tank corrosion causes one or more to leak fuel into our water supply, effectively cutting off water to half the island or more? The choice of the tanks' placement was a poor decision, and one that has not since been addressed by an entity - the military - that is supplied with considerable federal funds. Yes, moving the tanks or fixing them to the specifics outlined as the best choice by the Board of Water Supply would be costly, but doing anything less would be even more costly.

As nearly every resident, I am angry that our access to clean drinking water is in jeopardy because the Navy refuses to do what is right. Make them do what is right.

Sincerely,  
Brooke Jones  
Honolulu, HI 96817

16 My name is Jeannine Johnson and I am from the Kona side of O'ahu. I strongly support requiring Red Hill and other large-scale, antiquated field-constructed fuel tanks in Hawai'i to comply with federal requirements for standard tanks, including:

- Secondary containment and highly sensitive leak detection to protect against fuel leaks
- Corrosion protection to minimize erosion of steel underground
- Dramatically increase monitoring frequency and thoroughness

Freshwater is Hawai'i's most precious resource and it must be protected in the highest regard. The tanks at the Red Hill Bulk Fuel Storage Facility put our water quality at risk and threaten our public health. The facility was constructed in the 1940s and is the largest field-constructed underground storage tank system in the state, storing up to 187 million gallons of fuel just 100 feet above O'ahu's primary aquifer that supplies drinking water to over 600,000 residents from Hālawā to Hawai'i Kai.

Because the tanks are field constructed, the Red Hill facility is exempt from many state and federal regulations on underground storage tanks. This exemption is detrimental to human health and the environment and should not exist for this facility, especially because of its location—the opposite should hold true, stricter regulations should be in place to protect our drinking water resource.

I believe these tanks should be brought into to existing regulations because of the facility's long history of leaking fuel into the surrounding environment and its likelihood to continue to do so. Since the last major spill in 2014, the U.S. Navy has not done enough or acted with urgency to protect O'ahu's primary aquifer, further steps, such as implementing these stricter regulations, must be taken in the immediate future.

The State has an obligation to protect, control, and regulate the use of Hawai'i's water resources for the benefit of its people.

	Mahalo, Jeannine Johnson
17	Dear Department of Health, I fully support your public statement of relocating the Red Hill fuel tanks. The Red Hill fuel tanks should be relocated away from the aquifer to ensure there are no more leaks into our environment and drinking water sources rather than continue "sustainment / maintenance" of the existing tanks in accordance with current procedures. Oahu's sole source aquifer is the only one of its kind and cannot be replaced. Any cost to preserve, protect, and prevent it from being contaminated is worth the investment. Allowing any amount of fuel leaks into this resource is passing along the problem to future generations. Sincerely, Sandy Yee
18	You should be preparing to remove these tanks altogether. [comment 6] Regina Gregory
19	Dear Hawai'i Department of Health Solid and Hazardous Waste Branch, Aloha, I support the position of the Sierra Club Hawai'i and ask that you follow their recommendations. Mahalo for your consideration. Sincerely, Christina Kaleiwahea Aiea, HI 96701
20	Aloha friends, Thank you for allowing me to comment on this terribly important topic. My first point is that no leak is acceptable. My second point is that I feel the Navy will do its best with the budget given to it. If there are insufficient funds to remove the Red Hill tanks, then they will do the best they can with a poor situation. If they, however, are given the funds to relocate, then they will do that. Thus resolution to this terribly important topic is ultimately a budgetary one. Even if there are insufficient funds at this time to relocate the tanks, there are less expensive things that could be done, such as the nine other methods of release detection that have been discussed but are evidently not being implemented. Finally, I suggest an additional special condition be included in the permit as follows: "By December 31 of each year, provide DOH with a written update on what efforts, if any, are being made to relocate tanks F-1 to F-20." Thanks. Aloha, Bob Stauffer Honolulu
21	I served 29 years in the U.S. Army and Army Reserves.

	<p>The 20 storage tanks holding 187 million gallons of jet fuel embedded deep in Red Hill and only 100 feet above the Honolulu water supply have served the U.S. military 75 years — more than twice as long as I did.</p> <p>I’m 72 years old and have had the normal number of aches and pains including a hip replacement and skin cancer.</p> <p>The 20-story jet fuel storage tanks also have had aches and pains as well as its skin is getting thinner and thinner due to 75 years of corrosion — that skin is as thin as the edge of a dime in some places.</p> <p>My hip replacement didn’t turn out the best with my leg ending up one-half inch shorter than anticipated, and skin cancer surgery has left patches on my face, head and leg.</p> <p>Patching of the thin skin of the Red Hill jet fuel tanks didn’t turn out so well either, with the welding on one of the patches giving way and 27,000 gallons of jet fuel leaking out of the tanks, jeopardizing the Honolulu aquifer.</p> <p>Those of us in our 70s know all about leaks — it’s a hazard of age.</p> <p>I retired from the U.S. Army after 29 years.</p> <p>After 75 years of service, it’s time to retire the Red Hill Storage tanks — and protect our precious water supply.</p> <p>Ann Wright Honolulu, HI 96826 <a href="https://www.civilbeat.org/2018/03/navys-red-hill-analysis-concerns-environmental-regulators/">https://www.civilbeat.org/2018/03/navys-red-hill-analysis-concerns-environmental-regulators/</a></p>
22	<p>To Whom It May Concern:</p> <p>While I appreciate all the safeguards contained in the revised (June 12, 2019) permit application, I feel very strongly that this permit should not be issued. Instead, the Naval Supply Systems Command Fleet Logistics Center Pearl Harbor at Red Hill-Aiea and Joint Base Pearl Harbor-Hickam, Hawaii should be required to decommission the existing aged tanks and build new ones in a location that would not ever contaminate our aquifer should they happen to leak. The current tanks have already leaked more than once. If our aquifer becomes contaminated, it would be almost impossible, time consuming and extremely costly to repair the damage. The impact on the well being of the citizens and aina of Hawaii would be catastrophic.</p> <p>Thank you for your consideration in this matter.</p> <p>Sincerely, Judith Cucco</p>
23	<p>Aim righting this with Concern and Love for our corner of our world.</p> <p>Please do not approve permit to the Navy for Red Hill Fuel Tanks – we can not continue letting this go on with No right decision.</p> <p>My Greatest concern is that our water table will get contaminated and where will we all be. Yours’s and mine.</p> <p>Our children and our Future. And May I remind You – Your Family also.</p>

	<p>Not saying it will happen but if History repeats it self and it will happen <b>ALL IT TAKES IS ONCE.</b>  Currently know there is erosion in tanks – there are leaks. Do we sit and do nothing?  Who is responsible? Who will be held accountable.  Or like business as usual – say sorry – pay a fine – go through litigation – by then it’s Too Late.  My I remind you it JUST TAKES ONNCE.  <b>Be responsible and Do The Right Thing.</b>  Ted Tadaki</p>
24	<p>Dear Hawai’i Department of Health Solid and Hazardous Waste Branch,  They had an opportunity to demonstrate good stewardship and they failed. Do not approve this permit request.  Thank you kindly.  Sincerely,  James Doherty  Honolulu, HI 96816</p>
25	<p>Aloha folks,  As a Hawaii resident for the past 40+ years, I am extremely concerned about the threat to our water supply which these leaking Navy fuel tanks pose. I understand that the military has its mission, and its position on the tanks. However, YOUR, the Department of Health's mission, is to protect the health &amp; safety of our citizens. That's why we pay our taxes to the State of Hawai'i, and that's why you were hired.  I am writing to strongly urge you not to accept any compromise for our health, our children's health, and the future our our island. There is no greater threat to our health and well-being.  Please assure me you will insist that the tanks be moved.  Sincerely,  Ramona Hussey</p>
26	<p>Aloha Sir or Madam,  On behalf of Marshall Hung, former Housing Developer, I attached Marshall's letter about Red Hill Water &amp; Fuel Tank Problem.  Please see the attachment on this email. If you have any questions, please call me at [ ]. Mahalo.    Sincerely yours,  Wol Om, for Marshall Hung</p>



*Marshall W. Hung* - Former Developer for Honolulu  
215 N. King Street, Suite 1000, Honolulu, HI 96817  
W: 808.526.2027 ext. 6 F: 808.526-2066

June 10, 2019

To: Hawai'i Department of Health Solid and Hazardous Waste Branch

Re: Red Hill Water / Fuel Tank Problem – Navy Permit

Dear Hawai'i Department of Health Solid and Hazardous Waste Branch,

Thank you for the opportunity to provide comments on the Navy's pending permit application for the Red Hill Bulk Fuel Storage Facility. I request that permit approval be contingent upon adoption of a plan to relocate the tanks to a location that does not jeopardize the health and safety of O'ahu's drinking water, for the following reasons:

**The fuel tanks are located above O'ahu's primary drinking water source**

The Red Hill Bulk Fuel Storage Facility is located approximately 100 feet above the Southern O'ahu Basal Aquifer. On November 30, 1987, the Environmental Protection Agency designated the Southern O'ahu Basal Aquifer as the sole or principal source of drinking water for the entire Districts of Wahiawa and Ewa, and the portion of the Honolulu District west of the Manoa Stream channel. The EPA specifically concluded that "this aquifer, if contaminated, would create a significant hazard to public health."

**The fuel tanks have a history of leaks**

Constructed between 1940 and 1943, the Red Hill Bulk Fuel Tank Facility consists of 20 cylindrical fuel tanks that are 250 feet tall and 100 feet in diameter, each with a storage capacity for 12.5 million gallons of fuel. The tanks are comprised of field-constructed one quarter inch steel with reinforced concrete structural support. Since the facility was constructed, more than thirty leaks have been documented. The most recent release of 27,000 gallons of jet fuel in January 2014.

Due to the single-walled construction and location of these tanks, none of the leaked fuel has been located or cleaned up. Petroleum based contamination has been repeatedly detected in groundwater monitoring wells near the facility, the carcinogens naphthalene and benzene have been detected in wells at Red Hill,

and recent tests have revealed that the 75 year old steel lining of the tanks suffer from extensive corrosion.

**The Department of Health's public trust obligation**

The Hawai'i Department of Health has the constitutional and statutory authority to protect our drinking water from contamination. Pursuant to Article XI sections 1, 7, and 9 of the Hawai'i State Constitution, the Department of Health has a responsibility to protect all natural resources, including water quality, and uphold the rights of each person to a clean and healthful environment. The location of these tanks above a primary drinking water aquifer poses an unprecedented risk to O'ahu's water security. The Department should therefore approve the Navy's permit application conditional only upon the immediate adoption of a plan to remove the fuel currently stored in the facility and relocate the facility.

For these reasons, the Red Hill fuel tanks must be retired and the fuel stored there relocated away from O'ahu's aquifer. The Department of Health should use the opportunity of this permit to ensure the U.S. Navy relocates its fuel storage facility as soon as possible.

Thank you for this opportunity to comment on this permit application.

Sincerely,

A handwritten signature in black ink, appearing to read "Marshall Hung". The signature is fluid and cursive, with a long horizontal stroke at the end.

Marshall Hung, former real estate developer

27	<p>You shouldn't even require a permit! The military needs fuel to defend us.</p> <p>Steve Jackson</p>
28	<p>I am in full support of allowing the Navy's permit to go forward. I am completely satisfied with work completed by the Dept. of Defense and the statement by the EPA as to the potential for a catastrophic release being "very unlikely".</p> <p>Thank you,</p> <p>Neal Ikeda</p>
29	<p>Dear Hawai'i Department of Health Solid and Hazardous Waste Branch,</p> <p>I am writing to request that the Department of Health (DOH) schedule a public hearing regarding Navy's permit application for its Red Hill Facility. I also urge DOH to deny the application or, at a minimum, include additional special conditions before granting any permit to continue the operation of this aging and leaky facility.</p> <p>Much of this permit application is redacted and some parts seem to be completely missing. DOH should hold a public hearing to provide information to the public and allow the community to ask questions and share their concerns before approving any permit application for the Red Hill tanks. In this public hearing, DOH should explain how the Navy's release detection methods, lack of corrosion protection, and history of fuel leaks from the facility are sufficient to meet the requirements under HRS § 342L for underground storage tank systems to "prevent releases for their operating life" and be "protective of human health and the environment."</p> <p>The DOH should reject this application based upon the evidence of corrosion and leaks from the tanks, as well as risks associated with the continued operation of these tanks above a primary drinking water aquifer for O'ahu. In its 2015 Report to the State Legislature, the State of Hawai'i Red Hill Fuel Storage Facility Task Force declared that "storage of up to 187 million gallons of fuel, 100 feet above a drinking water resource, is inherently dangerous." Petroleum based contamination has been repeatedly detected in groundwater monitoring wells near the facility and the carcinogens naphthalene and benzene have been detected in wells at Red Hill. The Navy's "2018 Destructive Analysis" shows that the ¼ inch steel lining of the tanks are corroding faster than anticipated, while the "2019 Annual Leak Detection Testing report of 35 Sections (57,136 feet) of Petroleum Pipelines" shows many sections of the system appear to be leaking. Furthermore, this application fails to acknowledge or access the risk that earthquakes pose to the facility, and therefore to our aquifer. These tanks pose a great threat to the health and safety of our environment and the permit application should be denied due to these deficiencies.</p> <p>The tanks at Red Hill are unlike any other by size, structure, and location. While this permit offers some special conditions, DOH should incorporate additional requirements if it is inclined to grant the Navy's permit. These additional special conditions should include annual public disclosure of all fuel releases, a risk assessment and plan to address the threat of an earthquake, and the completion and adoption of a plan to decommission and relocate the tanks before the termination of this 5-year permit.</p> <p>I believe that the fuel tanks at Red Hill need to be retired in order to protect the communities that rely on the drinking water found beneath the tanks. If a permit is granted, the Department of Health should use this application as an opportunity to ensure the Navy relocates its fuel and builds a new, state of the art storage tank system as soon as possible.</p>

	<p>Thank you very much for the opportunity to provide comments on this extremely important issue.</p> <p>Sincerely,  Cindy Aban  Jan Adam  Noelani Ahia  Michelle Cabalse  Jennifer Chrupalyk  Meghan Debouk-Connors  Taylor Engle  Ruth Fujita  Maile Guss  Mary Jewell  Justin Keliipaakaua  Anne Massie  Shelley Muneoka  Phillip Nishimura  Amy Perruso  Sherry Pollack  Margaret Primacio  Dylan Ramos  James Rodrigues  Richard Senelly  Susan Sims  Bonnie Town  Christina Walker  Nathan Yuen</p>
30	<p>Please drain and relocate these aged, rusted dangerous tanks. ASAP Fresh water is vital to our Health and national Security.</p> <p>No way to clean up fuel in our wai/ Fresh water.  [comment 29]  Sincerely,  Heidi Bornhorst  Honolulu, HI 96816</p>
31	<p>Aloha Hawai'i Department of Health Solid and Hazardous Waste Branch,</p> <p>Please retire the fuel tanks at Red Hill in order to protect the drinking water found beneath the tanks. If a permit is granted, I believe the Department of Health should use this application as an opportunity to ensure the Navy relocates its fuel and builds a new, state of the art storage tank system as soon as possible.</p> <p>Therefore, I request that you schedule a public hearing regarding Navy's permit application for its Red Hill Facility. I also urge you to deny the application based upon the evidence of corrosion and leaks from the tanks, as well as risks associated with the continued operation of these tanks above a primary</p>

	<p>drinking water aquifer for O'ahu.</p> <p>But if you are inclined to grant the Navy's permit, I ask you to include additional special conditions, such as annual public disclosure of all fuel releases, a risk assessment and plan to address the threat of an earthquake, and the completion and adoption of a plan to decommission and relocate the tanks before the termination of this 5-year permit. These types of special conditions make sense since the tanks at Red Hill are unlike any other by size, structure, and location.</p> <p>Maholo for your consideration of my comments on this extremely important issue. Sincerely, Nicole Woo Honolulu, HI 96813</p>
32	<p>After listening to multiple testimonies from Honolulu Board of Water Supply's Ernest Lau, Honolulu City Council testimonies (Council members, the public and the Navy) and reading statements from the EPA's website, my family and I are genuinely concerned about the possibility of serious leaks from the Red Hill Fuel tanks on Oahu. [comment 29] Janet Pappas</p>
33	<p>Please find our public comments attached. Benton Kealii Pang, <i>Pelekikena</i> Ke One O Kākūhihewa - O'ahu Council of the Association of Hawaiian Civic Clubs website: <a href="http://www.kakuhihewa.org/">http://www.kakuhihewa.org/</a></p> <p>Sirs: Ke One O Kākūhihewa - O'ahu Council of the Association of Hawaiian Civic Clubs submits public comments for the Red Hill Fuel Tank permit review. These comments complement those sent previously.</p> <p>Mahalo for the opportunity to comment.</p> <p>Sincerely, Benton Kealii Pang, Ph.D.</p> <p>Attachment.</p>



# KE ONE O KĀKUHHEWA

O'ahu Council of the  
Association of Hawaiian Civic Clubs

**BENTON KEALII PANG, PH.D.,-HAWAIIAN CIVIC CLUB OF  
HONOLULU**  
PELEKIKENA

**JACOB KA'ŌMAKAOKALĀ AKI-KING KAMEHAMEHA HCC**  
HOPE PELEKIKENA

**KALANI L. KA'ANĀ'ANĀ-KAILUA HCC**  
HOPE PELEKIKENA 'ELUA

**ALBERTA LOW-PEARL HARBOR HCC**  
PU'UKŪ

**ROTH PUAHALA -KING KAMEHAMEHA HCC**  
PELEKIKENA IHO NEI

**TERI LOO-KO'OLAUPOKO HCC**  
KĀKAU 'ŌLELO

**CHRISTINE "CHRISSEY" ANJO-PEARL HARBOR HCC**  
HOLE KĀKAU 'ŌLELO

**'AHAHUI SIWILA HAWAI'I O KAPOLEI**  
LANCE HOLDEN

**ALII PAUAHI HCC**  
KEHAULANI LUM

**'EWA-PU'U'LOA HCC**  
MARLEEN KAU'I SERRAO

**HCC OF HONOLULU**  
MANU BOYD

**KAILUA HCC**  
MAPUANA DE SILVA

**KALIHI-PĀLAMA HCC**  
KAIMO MUHLESTEIN

**KING KAMEHAMEHA HCC**  
LETANI PELTIER

**KO'OLAULOA HCC**  
RANAE "TESSIE" FONOIOMOANA

**KO'OLAUPOKO HCC**  
ALICE P. HEWETT

**LUALUALEI HCC**  
SHIRLINE HO

**MĀKAHA HCC**  
LUANN LANKFORD-FABORITO

**MAUNALUA HCC**  
ROSE KITTY SIMONDS

**NA LANI 'EHA HCC**  
R. KELANI RAMOS

**NĀNĀIKAPONO HCC**  
JAYCINE HICKS

**PAPAKŌLE'A HCC**  
KEALI'I LUM

**PEARL HARBOR HCC**  
KU'UMEALOHA GOMES

**PRINCE KŪHIŌ HCC**  
A. MAKANA PARIS

**PRINCESS KAI'ULANI HCC**  
LEIMANA DAMATE

**QUEEN EMMA HCC**  
RAWLETTE P. KRAUT

**HCC OF WĀHIWA**  
MARIE "MĀLIA" DOO

**HCC OF WAIALUA**  
MAKALAPUA CASSON-FISHER

**WAI'ANAE HCC**  
CYNTHIA ENRIQUEZ

**WAIKIKI HCC**  
L. PI'IKEA TOMCZYK

**HCC OF WAIMĀNALO**  
FAITH KA'IAMA

State of Hawai'i Department of Health  
Solid and Hazardous Waste Branch  
2827 Waimano Home Rd #100  
Pearl City, Hawai'i 96782

June 29, 2019

Aloha e Hawai'i Department of Health Solid and Hazardous Waste Branch,

Ke One O Kākuhihewa is requesting that the Department of Health (DOH) schedule a public hearing regarding Navy's permit application for its Red Hill Facility. We also urge DOH to deny the application or, at a minimum, include additional special conditions before granting any permit to continue the operation of this aging facility.

In reviewing the permit application, we find it redacted with some parts completely missing. DOH should hold a public hearing before approving any permit application for the Red Hill tanks. In this public hearing, DOH should explain how the Navy's release detection methods, lack of corrosion protection, and history of fuel leaks from the facility are sufficient to meet the requirements under HRS § 342L for underground storage tank systems to "prevent releases for their operating life" and be "protective of human health and the environment."

Furthermore, we request the DOH reject this application based upon the evidence of corrosion and leaks from the tanks, as well as risks associated with the continued operation of these tanks above a primary drinking water aquifer for O'ahu. In its 2015 Report to the State Legislature, the State of Hawai'i Red Hill Fuel Storage Facility Task Force declared that "storage of up to 187 million gallons of fuel, 100 feet above a drinking water resource, is inherently dangerous." Petroleum based contamination has been repeatedly detected in groundwater monitoring wells near the facility and the carcinogens naphthalene and benzene have been detected in wells at Red Hill. The Navy's "2018 Destructive Analysis" shows that the 1/4 inch steel lining of the tanks are corroding faster than anticipated, while the "2019 Annual Leak Detection Testing report of 35 Sections (57,136 feet) of Petroleum Pipelines" shows many sections of the system appear to be leaking. This application also fails to acknowledge or assess the risk that earthquakes pose to the facility, and therefore to our aquifer. These tanks pose a great threat to the health and safety of our environment and the permit application should be denied due to these deficiencies.

The tanks at Red Hill are unlike any other by size, structure, and location. While this permit offers some special conditions, DOH should incorporate additional requirements if it is inclined to grant the Navy's permit. These additional special conditions should include annual public disclosure of all fuel releases, a risk assessment and plan to address the threat of an earthquake, and the completion of a plan to decommission and relocate the tanks to a state-of-the-art facility before the termination of this 5-year permit.

Mahalo nui for the opportunity to provide comments on this important issue to our members and our communities.

*Ke One O Kakūhihewa is a native Hawaiian council made up of 24 civic clubs on the island of O'ahu. Our oldest member, Hawaiian Civic Club of Honolulu was established by Prince Jonah Kūhiō Kalaniana'ole on December 7, 1918.*

Sincerely,



Benton Kealii Pang, Ph.D.

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# KE ONE O KĀKUHHEWA

O'ahu Council of the  
Association of Hawaiian Civic Clubs

BENTON KEALII PANG, PH.D.,-HAWAIIAN CIVIC CLUB OF  
HONOLULU  
PELEKIKENA

JACOB KA'ŌMAKAOKALĀ AKI-KING KAMEHAMEHA HCC  
HOPE PELEKIKENA

GEORGIANA NAVARRO-MĀKAHA HCC  
HOPE PELEKIKENA 'ELUA

ALBERTA LOW-PEARL HARBOR HCC  
PU'UKU

ROTH PUAHALA -KING KAMEHAMEHA HCC  
PELEKIKENA IHO NEI

TERI LOO-KO'OLAUPOKO HCC  
KĀKAU 'ŌLELO

CHRISTINE "CHRISSEY" ANJO-PEARL HARBOR HCC  
HOLE KĀKAU 'ŌLELO

'AHAHUI SIWILA HAWAII O KAPOLEI  
LANCE HOLDEN

ALI'Ī PAUHI HCC  
KEHAULANI LUM

'EWA-PU'ULOVA HCC  
MARLEEN KAU'I SERRAO

HCC OF HONOLULU  
MANU BOYD

KAILUA HCC  
MAPUANA DE SILVA

KALIIHI-PĀLAMA HCC  
KAIMO MUHLESTEIN

KING KAMEHAMEHA HCC  
LETANI PELTIER

KO'OLAULOVA HCC  
RANAE "TESSIE" FONOIOMOANA

KO'OLAUPOKO HCC  
ALICE P. HEWETT

LUALUALEI HCC  
SHIRLINE HO

MĀKAHA HCC  
LUANN LANKFORD-FAVORITO

MAUNALUA HCC  
ROSE KITTY SIMONDS

NA LANI 'EHA HCC  
R. KELANI RAMOS

NĀNĀIKAPONO HCC  
JAYCINE HICKS

PAPAKŌLE'A HCC  
KEALI'I LUM

PEARL HARBOR HCC  
KU'UMEALOHA GOMES

PRINCE KŪHIŌ HCC  
A. MAKANA PARIS

PRINCESS KAI'ULANI HCC  
RUSTY RODENHURST

QUEEN EMMA HCC  
RAWLETTE P. KRAUT

HCC OF WĀHIWA  
MARIE "MĀLIA" DOO

HCC OF WAIALUA  
MAKALAPUA CASSON-FISHER

WAI'ANAE HCC  
CYNTHIA ENRIQUEZ

WAIKŪI HCC  
L. PI'IKEA TOMCZYK

HCC OF WAIMĀNALO  
KALANI KALIMA

JUNE 28, 2019

State of Hawaii, Department of Health-Solid and Hazardous Waste  
Branch  
2827 Waimano Home Rd #100  
Pearl City, Hawai'i 96782

VIA EMAIL: [DOHrhcomments@HawaiiOIMT.onmicrosoft.com](mailto:DOHrhcomments@HawaiiOIMT.onmicrosoft.com)

Aloha! I am writing on behalf of Ke One O Kākuhihewa, the O'ahu Council of the Association of Hawaiian Civic Clubs (Council). We DO NOT support the draft permit for an underground storage tank (UST) system operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor at Red Hill-'Aiea and Joint Base Pearl Harbor-Hickam, Hawai'i.

Our Council has strong reservations with this permit because previous comments regarding the operation of the Red Hill UST have not been addressed. On June 18, 2015, our Council submitted comments to the US Environmental Protection Agency (EPA), the Hawaii Department of Health-Solid Waste Management Branch (DOH), the U.S. Navy (USN) and the U.S. Defense Logistics Agency (DLA). We determined the Red Hill UST pose a "constant and immediate threat" to our island aquifer. We also requested to be included in consultations with the Native Hawaiian community under Section 106 of the National Historic Preservation Act, advocated for the relocation, replacement or rehabilitation of each of the active UST within 10 years, remove inactive UST and develop of a new website highlighting the corrective actions.

In September of 2015, the Council adopted a resolution entitled "Calling Upon the US Navy Expedite Corrective Actions to the Red Hill Bulk Storage Facility." On November 14, 2015, the Association of Hawaiian Civic Clubs supported this resolution at its annual convention and passed resolution 15-10: Requesting the U.S. Navy Expedite Corrective Actions To The Red Hill Bulk Fuel Storage Facility and Safeguard O'ahu's Drinking Water". This resolution urged the USN to relocate the UST, immediately remediate all areas where fuel has leaked in the past 60 years, conduct regular inspections, and immediately remediate future fuel leaks. In April 2017, the O'ahu Council invited Admiral John V. Fuller to its July 8th Council meeting but the Admiral could not make the meeting



due to a recent change of command. Hawaiian Civic Club members of our Council attended the June 22, 2017, public meeting sponsored by the EPA, DOH, USN, and the DLA and posed questions about the water monitoring and leaking, removing the storage tanks and requested a site visit of the fuel tanks.

Our Council is on record requesting corrective actions take place immediately at Red Hill to prevent the further leaking of fuel into our groundwater. For the past four years, these corrective actions have not taken place expeditiously, and therefore we cannot support the draft permit under review.

Ke One O Kakūhihewa is a native Hawaiian council made up of 24 civic clubs on the island of O‘ahu. Our oldest member, Hawaiian Civic Club of Honolulu was established by Prince Jonah Kūhiō Kalaniana‘ole on December 7, 1918.

Mahalo for the opportunity to share our mana‘o.

Sincerely,

Benton Kealii Pang, Ph.D.



34	<p>Aloha: Please find the testimony of the Association attached for the UST Red Hill Permit application. Mahalo, -- A. Makana Paris Government Relations Chair Association of Hawaiian Civic Clubs</p>
----	--



ASSOCIATION OF HAWAIIAN CIVIC CLUBS  
P.O. BOX 1135, HONOLULU, HAWAII 96805 | AOHCC.ORG

*Pō'alima, June 29, 2019*

State of Hawaii, Department of Health-Solid and Hazardous Waste Branch  
2827 Waimano Home Rd #100  
Pearl City, Hawaii 96782

*Submitted via e-mail: DOHrhcomments@HawaiiOIMT.onmicrosoft.com*

Re: Underground Storage Tank Red Hill Permit Application

*Aloha,*

The Association of Hawaiian Civic Clubs **DOES NOT SUPPORT** the permit for an underground storage tank (UST) system operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor at Red Hill-‘Aiea and Joint Base Pearl Harbor-Hickam, Hawaii. At its 56th annual convention the Association passed resolution 2015-10 requesting the U.S. Navy expedite corrective actions to the red hill bulk fuel storage facility and safeguard Oahu’s drinking water. To date, the Navy has not adequately addressed the concerns raised by the Association.

We submit this letter in solidarity with Ke One O Kākuhihewa, O‘ahu Council and we urge the Department of Health to not approve the permit application.

The Hawaiian Civic Club movement was founded in 1918 by Congressional Delegate Prince Jonah Kūhiō Kalaniana‘ole with the creation of the Hawaiian Civic Club; the Association was formally organized in 1959 and has grown to a confederation of over sixty (60) Hawaiian Civic Clubs located throughout the State of Hawaii and the United States. The Association is the oldest Hawaiian community-based grassroots organization. The Association is governed by a 16-member Board of Directors; advocates for improved welfare of Native Hawaiians in culture, health, economic development, education, social welfare, and nationhood; and perpetuates and preserves language, history, music, dance and other Native Hawaiian cultural traditions.

*Mahalo* for allowing us to share our *mana‘o*.

*Me ka ‘oia‘i‘o,*

Hailama Farden  
*Pelekikena*

***ASSOCIATION OF HAWAIIAN  
CIVIC CLUBS***

***A RESOLUTION***

15 - 10

**REQUESTING THE U.S. NAVY TO EXPEDITE CORRECTIVE ACTIONS  
TO THE RED HILL BULK FUEL STORAGE FACILITY AND SAFEGUARD OAHU'S  
DRINKING WATER**

WHEREAS, Native Hawaiians consider freshwater, or wai, sacred to the Gods Kāne and Lono;  
and

WHEREAS, wai has been integral to a vibrant Hawaiian community from ancient times to the  
present; and

WHEREAS, vital to their survival, Hawaiians have always protected the wai for their sustenance  
and in order to produce the bounty of foods and forests products important to them; and

WHEREAS, the United States Navy has operated its Red Hill Bulk Fuel Storage Facility in the  
Pu'uloa area of O'ahu since the 1940's; and

WHEREAS, the facility includes 20 large field-constructed underground fuel storage tanks, each  
holding at least 12.5 million gallons of jet fuel; and

WHEREAS, these tanks are located in the area under which lies the Pearl Harbor aquifer, the  
largest fresh water resource on the island of O'ahu; and

WHEREAS, concern has been raised that fuel leakage from the tanks could contaminate the  
fresh water supply that supports the island from Maunaloa to Mākuā; and

WHEREAS, although initial testing has not yet found significant contamination in water samples  
drawn from wells in the immediate vicinity, concerns remain about continuing leakage and  
threats to the groundwater aquifer; and

WHEREAS, according to documents formerly classified by the Department of Defense, these  
storage tanks have been leaking fuel for much of the past 50 years; and

WHEREAS, in January 2014, fuel was found leaking from Tank No. 5, an amount estimated in  
excess of 27,000 gallons of fuel; and

WHEREAS, despite Navy denials, a former administrator for the State Department of Health (DOH) says the remaining active tanks continue to leak until today; and

WHEREAS, the U.S. Environmental Protection Agency (EPA) has signed an Administrative Order of Consent (AOC), with the State DOH, the Defense Logistics Agency, and the U.S. Navy, identifying corrective actions to be taken at the Red Hill storage facility; and

WHEREAS, this draft AOC would allow the Navy additional time to pursue best-practice technologies for addressing the leakage problem; and

WHEREAS, the EPA, Department of Health and U.S. Navy held an informational meeting earlier this year to receive comments from the public about the AOC; and

WHEREAS, overwhelmingly, the response to the reports of leaking fuel tanks at Red Hill has alarmed the community with concerns about potential risks to the fresh water supply; and

WHEREAS, most comments requested that the tanks be repaired or relocated expeditiously and without delay to minimize any further harm to the aquifer; and

WHEREAS, the EPA, DOH and U.S. Navy have taken these comments into consideration and are contemplating what changes, if any, can be made to the AOC; and

WHEREAS, it is uncertain when a formal response from the EPA, DOH and U.S. Navy will be announced to the public.

NOW, THEREFORE, BE IT RESOLVED, by the Association of Hawaiian Civic Clubs at its 56<sup>TH</sup> annual convention at Lahaina, Maui this 14<sup>th</sup> day of November 2015, that we request the U.S. Navy to expedite corrective actions to the Red Hill bulk fuel storage facility and safeguard Oahu's drinking water; and

BE IT FURTHER RESOLVED, that the U.S. Navy is hereby requested to take all actions necessary to relocate these fuel tanks to sites that do not lie over groundwater resources; and

BE IT FURTHER RESOLVED, that the U.S. Navy is hereby urged to immediately remediate the release of fuel from the Red Hill bulk storage facility which has occurred over the past 60 years; and

BE IT FURTHER RESOLVED, that the U.S. Environmental Protection Agency, the DOH and the State Commission on Water Resource Management are hereby asked to uphold their kuleana (responsibilities) to protect the safety and quality of our island's fresh water resources by ensuring that all underground storage facilities, including those of the U.S. military, are regularly inspected and that all fuel resources are accounted for to ensure prompt leak detection and repair; and

BE IT FURTHER RESOLVED, that a certified copy of this resolution be transmitted to the Governor of Hawaii, State Senate Committee on Hawaiian Affairs, State House Committee on Ocean, Marine Resources, & Hawaiian Affairs, The Office of Hawaiian Affairs Chair of the Board of Trustees, members of Hawaii's congressional delegation, the Commander Navy Region Hawai'i, the Director of the Defense Logistics Agency, the Administrator of the U.S. Environmental Protection Agency, the Director of the State Department of Health, the Chair of the Commission on Water Resource Management and Mayor Kirk Caldwell.



The undersigned hereby certified that the foregoing Resolution was duly adopted on the 14<sup>th</sup> day of November 2015, at the 56<sup>th</sup> Annual Convention of the Association of Hawaiian Civic Clubs in Lahaina, Maui.

*Annelle C. Amaral*  
Annelle C. Amaral, President

35 Dear Ms. Kwan:  
I am encouraged by the Dept of Health's (DOH) attempt to gather specific information regarding the condition and safety of the underground fuel tanks housed at the Red Hill Bulk Fuel Storage Facility (RHBFSS). In response to the Navy's Underground Storage Tank (UST) permit application of Mar 14, 2019, the DOH's notice of incomplete application sent Apr 12, 2019 asked for specific and meaningful data about the location, condition, and monitoring of these 75 year old tanks. The Navy's response letter received May 23, 2019 promised to address the DOH's concerns. However, the revised permit application received with that letter is heavily redacted. Approximately half of the 124 page document is blacked out. I do not see any answers to the DOH's specific questions regarding tank location, tank specifications, leak detection methods, tank tightness testing, and inventory reconciliation. Without this data, their response is meaningless. I suggest their application be denied.

If the DOH received an unredacted version, I hope it contained all of the requested information to the degree of specificity asked. I hope the DOH has also consulted with an independent lab and engineering firm to corroborate the data and conclusions. The public -- citizens such as myself, the Sierra Club, and the Board of Water Supply -- do not have access to this information and so rely heavily on the DOH to diligently protect us. I appreciate that.

Mahalo,  
Melanie Lau, MD

36 Aloha Department of Health Hawaii,  
I am a resident, born and raised here, on the island of Oahu. I have spoken to the Navy Liaison and was also offered a tour of the facility. I also understand that for many years this facility has had no incidents of leakage in our islands. I am concerned that if these fuel tanks are relocated than the Navy will also relocate. It is not a fuel system that will only effect the Navy but it could lead to leaving our state vulnerable to other countries and weakening the security of our nation? I am also concerned that we will lose a back up fuel system that can be utilized for our community members during a natural disaster?

The Naval base provides approximately 5k jobs for our locals on this island. Five thousand families will be negatively effected if the naval base decided to shut down the fuel tanks and relocate to a different state. It will compromise our security against three of our current enemies within the pacific. Our economy thrives on the monies that these families invest in our state. The taxes for most of our local families leave them with little funds to spend at the end of each pay period. They provide contracts and positions that help our community and community members. They have considered a few options to prevent fuel spills. They have not had one spill compared to the amount of BWS pipe breakages. I believe working together to find a compromise will be most beneficial to our state. Please consider keeping the fuel station operational. There is also an understanding that the fuel station will in time shut down on its own as our country has been finding alternative resources for fuel.

Please consider the amount of family members that will be effected if the naval base relocates and how that relocation will effect the economy. It is a joint base meaning airforce may relocate as well?

Thank you for your time,  
Leslie Mckeague

37	<p>Completed studies estimate that in the next 100 years there is a chance that there will be one leak in the Red Hill system. During that 100 years there will be numerous tsunamis, hurricanes, and earthquakes that could extinguish Oahu's electrical grid. The only way to get fuel to aircraft, HECO, ships, and trucking will be through the gravity fed Red Hill petroleum. On a risk vs risk basis keeping Red Hill operating is not only a national security issue but an island economic priority. The Navy has been very forthcoming and objective in its approach to mitigation and should be allowed to execute their cost effective solution.</p> <p>R.J. "Zap" Zlatoper Honolulu, HI 96816</p>
38	<p>Attached (and below) are comments for the Hawaii Department of Health, Solid and Hazardous Waste Branch regarding the Red Hill Bulk Fuel Facility.</p> <p>Larry Osborn CAPT, USN (Ret) National Director Navy League of the United States President Honolulu Council</p>



Honolulu Council  
**NAVY LEAGUE OF THE UNITED STATES**  
FOUNDED 1902

June 27, 2019

To: The Hawaii Department of Health  
Solid and Hazardous Waste Branch

This letter pertains to the draft permit for an underground storage tank (UST) system operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor at Red Hill-Aiea and Joint Base Pearl Harbor-Hickam, Hawaii.

In the months leading up to Pearl Harbor, recognizing the vulnerability of above ground fuel storage on Oahu, the Navy began construction of an underground fuel storage facility at Red Hill.

Completed following the Japanese attack on Pearl Harbor in 1941, The Red Hill Bulk Fuel Facility has since provided fuel for all the military services stationed on Oahu, to include the Navy, Air Force, Marine Corps, Coast Guard, and Hawaii National Guard. In all the years following its introduction into service there has been only one recorded significant fuel spill. This occurred in 2014 and the cause was attributed to a contractor's error as well as ineffective response and oversight, not attributable to the design or material condition of the tanks. Since 2006 the Department of Defense has spent \$260 million in modernization, oversight, technology, and operating procedures. The Navy is committed to protect Oahu's drinking water.

The Environmental Protection Agency and the Hawaii Department of Health in a joint statement have asserted that "a catastrophic release from the Facility into groundwater is very unlikely."

The Navy League of the United States is a civilian organization established in 1902 and dedicated to the principle that strong sea services are vital to a maritime nation's national defense and economic well being. Maritime security is vital to our island state.

Without the capability afforded by the Red Hill Bulk Fuel Facility, our military forces could no longer operate as they do now from bases on Oahu. Not only is this unacceptable from a national defense perspective, it would be disastrous for our state's economy. Therefore, Navy League of the United States Honolulu Council supports in the strongest way possible any action that assures continuity of operations of the Red Hill Bulk Fuel Facility.

Sincerely,

Lawrence E. Osborn  
President  
Navy League of the United States, Honolulu Council

39	<p>Aloha:</p> <p>I support granting the UST Red Hill Permit for the US Navy to continue its current operation of the tanks.</p> <p>I have attended two briefings on the concerns and mitigations of the Red Hill tank farm. I find the Navy recognizes the challenges and concerns and has taken the appropriate steps to date and has a well-conceived plan for the future.</p> <p>Please grant the permit. Mahalo. David A. Bramlett Hawaii Resident Makiki</p>
40	<p>The following are my personal comments in regard to the U.S. Navy's subject application.</p> <p>The Navy's UST facility at Red Hill remains the critical forward based fuel supply system to support U.S. military operations in the Asia Pacific. Built in the 1940s, the UST facility has proven its strategic military value by successfully serving our Nation well during WWII in the Pacific, the Korean War, and the Vietnam War, and in meeting the current security threats posed by China, North Korea, and other antagonists in the region. Today's security threats in the Asia Pacific pose a real time threat to enabling continued free and open use of international ocean waterways that serve as the economic engine for Asia Pacific nations, and in ensuring that the U.S. is able to meet its global security and trade commitments.</p> <p>It is my understanding that there is no more vital U.S. military fuel supply facility operating in this area of responsibility.</p> <p>The remedial actions taken by the U.S. Navy in accordance with the Administrative Order of Consent to better protect each of the twenty storage tanks from future leaks appear to be satisfactory. However, as was evidenced by the last reported fuel leak of 27,000 gallons in 2014, materiel and engineering failures, coupled with human error resulting from inadequate contractor work and management oversights in inspecting, repairing, maintaining, and making improvements, remain concerns.</p> <p>In this regard, the fact that the location of the facility being only 100 feet above Oahu's primary source of clean water poses a serious environmental concern that should be addressed before a final decision is rendered. It appears prudent that the state Department of Land and Natural Resources and Attorney General be tasked to join with the state Department of Health and the U.S. Environmental Protection Agency to determine if the current location of the fuel storage facility meets the requirements outlined in the U.S. Clean Water Act and other related federal environmental laws, as well as Hawaii's statutes.</p> <p>The above suggested action could help to determine if the current location of the UST facility poses an unacceptable environmental threat to the only primary source of clean water for O`ahu.</p> <p>Charles Ota Aiea, HI</p>

41	<p>Aloha, Please find attached a letter in support of the application from the Hawaii Military Affairs Council. If you should have any questions, please feel free to reach out to either myself or to the Hawaii MAC email address that is cc'd.</p> <p>Mahalo. Dan Kouchi   Assistant Vice President, Government Affairs &amp; Alliances</p>
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June 27, 2019

Hawaii Department of Health  
Solid and Hazardous Waste Branch  
2827 Waimano Home Road #100  
Pearl City, HI. 96782

**RE: Underground Storage Tank Red Hill Permit Application**

The Hawaii Military Affairs Council (MAC) stands in strong support of the issuance of a permit for an underground storage tank (UST) system operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor at Red Hill-Aiea and Joint Base Pearl Harbor-Hickam.

The MAC was established in 1985 as part of the Chamber of Commerce Hawaii, and advocates on behalf of Hawaii's military, and is comprised of business leaders and retired U.S. flag and general officers. The MAC works to support Hawaii's location as a strategic U.S. headquarters in the Indo-Asia-Pacific region.

Hawaii is the most forward leaning of U.S. soil in the Indo-Asia-Pacific region, and plays a key role in our nation's security posture. Moreover, U.S. military presence is the second largest sector in Hawaii's economy. The Red Hill Underground Fuel Storage Facility is vital to military readiness as it supports all Hawaii-based military actions and a significant share of many more assets in the Indo-Asia-Pacific region. The military's ability to remain "ready to respond" is essential for preserving the military's presence in the State. And, Red Hill is the source of fuel for all civilian aircraft and maritime vessels in times of emergency because it is gravity-fed and requires no power generation to function. It is a part of our State's civil defense and has been accessed for this purpose in the past during our time of need.

Additionally, we understand that the location at Red Hill has caused concern relating to the preservation of our island's water source. Since the 2014 self-reported fuel leak at Red Hill, which was caused by contractor error and not a corroding or leaking tank, the Navy and the Defense Logistics Agency (DLA) entered into an enforceable agreement known as an Administrative Order on Consent (AOC) with the Environmental Protection Agency (EPA) and the State Department of Health (DOH). The AOC requires that the Navy and DLA take actions, subject to approval by the EPA and DOH, to inspect, repair and maintain, and implement improvements to protect residents and the environment. Ongoing studies are underway, and millions of dollars will continue to be expended for these purposes. An Industry Day was just held calling for the latest in innovation and technology to further improve all aspects of the UST system. It is our expectation that the Navy will continue to be good stewards, acting in good faith with the UST system, and should receive its permit for the Red Hill facility.

Thank you for the opportunity to provide comments in support of this permit application.

42	<p>Aloha,</p> <p>I am writing to express my concern regarding the Navy's assessment of the risk to ground water contamination associated with the single-wall storage of jet fuel at the Red Hill bulk fuel storage facility.</p> <p>In it's report (GPEC 7-27-18), the Navy concludes that a chronic release of 2,300 gallons or a sudden release of 120,000 or 400,000 gallons would not be a problem. In the case of the sudden release of 700,000 gallons, it would not be a problem because the contamination of the water would not exceed 400 micrograms per liter in the Red Hill Shaft Water Supply and the Red Hill groundwater does not flow to the Honolulu Board of Water Supply wells.</p> <p>This does not sound like a responsible way to view the precious water supply on an island with limited water resources. I would hope that the agencies concerned would use the precautionary principle to protect our valuable resources - resources essential to life.</p> <p>I urge the Department of Health to reject these conclusions and deny approval of a single wall tank upgrade for the Red Hill facility. The best option is relocation and next best would be a double-wall upgrade.</p> <p>Thank you for considering my comment. Diana Bethel Makiki, Honolulu</p>
43	<p>Aloha,</p> <p>I am writing to ask you to deny the Navy's permit to continue using the fuel storage tanks at Red Hill. These old tanks are in danger of leaking into a major aquifer for the West side of O'ahu. I understand that they are as thin as a dime in some areas. We do not need to wait for a disaster before doing something to protect our water. The Navy needs to move its fuel storage into a safer area. Their word about the safety of these tanks is not to be trusted. The military has denied environmental harm on numerous occasions elsewhere in this country. Their assurances mean nothing. We must act to deny their permit!</p> <p>Blessings, Rev. Dr. Michele Shields Kaneohe, HI 96744</p>
44	<p>Dear Hawai'i Department of Health Solid and Hazardous Waste Branch,</p> <p>I am writing on behalf of Our Revolution Hawaii's 5,000 supporters and members in Hawaii to request that the Department of Health deny the Navy's permit application for its Red Hill Facility. We request this because the U.S. military has a proven historical track record of ignoring, covering up, and not cleaning up land and public water systems that they have contaminated.</p> <p>It is an irrefutable fact that the U.S. military is the biggest single polluter in the world.</p> <p>The U.S. military has generated over 130 Superfund sites in the U.S. that they have not cleaned up.</p> <p>The U.S. military has contaminated scores of public water aquifers across the U.S, and has not cleaned</p>

them up, and has refused to take responsibility for their actions.

In Hawaii there are many contaminated sites that the military has not cleaned up, including: Kahoolawe, Makua Valley, Pearle Harbor, etc.

The U.S. military has proven that it cannot be trusted to protect Hawaii's people, land, and water from contamination. So the only ones we can count on to protect Hawaii's drinking water are our own local Hawaii agencies, like the Board of Water Supply and the Department of Health.

Please deny the Navy's permit application for their Red Hill facility.

Mahalo for your kind attention,  
Dave Mulnix, Organizer, Our Revolution Hawaii  
Kaneohe, Hawaii, 96744

References:

\* U.S. Military Is World's Biggest Polluter <https://www.ecowatch.com/military-largest-polluter-2408760609.html>

\* Navy To Deny All Civil Claims Related To Camp Lejeune Water Contamination <https://www.nbcnews.com/news/military/navy-deny-all-civil-claims-related-camp-lejeune-water-contamination-n962206>

\* Air Force Refuses To Follow Michigan PFAS Law <https://www.mlive.com/news/2019/01/air-force-refuses-to-follow-michigan-pfas-law.html>

\* The PFAS Contamination Crisis: US Military Poisons Hundreds of Communities <https://worldbeyondwar.org/the-pfas-contamination-crisis-us-military-poisons-hundreds-of-communities/>

\* DoD: At least 126 Bases Report Water Contaminants Linked To Cancer, Birth Defects <https://www.militarytimes.com/news/your-military/2018/04/26/dod-126-bases-report-water-contaminants-harmful-to-infant-development-tied-to-cancers/>

\* Military Bases' Contamination Will Affect Water For Generations <https://troubledwater.news21.com/military-bases-contamination-will-affect-water-for-generations/>

\* Exposures and Military Bases in the United States <https://www.hillandponton.com/military-base-exposures-united-states/>

45 Relative to the draft permit for an underground storage tank (UST) system operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor at Red Hill-Aiea and Joint Base Pearl Harbor-Hickam, Hawaii, I would like to submit my testimony in support.

In the months leading up to Pearl Harbor, recognizing the vulnerability of above ground fuel storage on Oahu, the Navy began construction of an underground fuel storage facility at Red Hill.

Completed following the Japanese attack on Pearl Harbor in 1941, The Red Hill Bulk Fuel Facility has since provided fuel for all the military services stationed on Oahu, to include the Navy, Air Force, Marine Corps, Coast Guard, and Hawaii National Guard. In all the years following its introduction into service there has been only one recorded significant fuel spill. This occurred in 2014 and the cause was attributed to a contractor's error as well as ineffective response and oversight, not attributable to the design or material condition of the tanks. Since 2006 the Department of Defense has spent \$260 million in modernization, oversight, technology, and operating procedures. The Navy is committed to protect Oahu's drinking water.

The Environmental Protection Agency and the Hawaii Department of Health in a joint statement have asserted that " a catastrophic release from the Facility into groundwater is very unlikely."

The Navy League of the United States is a civilian organization established in 1902 and dedicated to the principle that strong sea services are vital to a maritime nation's national defense and economic well being. Maritime security is vital to our island state. Without the capability afforded by the Red Hill Bulk Fuel Facility, our military forces could no longer operate as they do now from bases on Oahu. Not only is this unacceptable from a national defense perspective, it would be a disaster for our state's economy. Therefore, Navy League of the United States Honolulu Council supports in the strongest way possible any action that assures continuity of operations of the Red Hill Bulk Fuel Facility.

Respectfully,  
Jane Ferreira  
Executive Director  
Navy League of the United States  
Honolulu Council

46 Board of Water Supply, City and County of Honolulu (mailed)

## BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
www.boardofwatersupply.com



June 24, 2019

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Deputy Manager and Chief Engineer

Dr. Bruce Anderson  
Director of Health  
State of Hawaii  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

Attention: Roxanne Kwan  
Solid and Hazardous Waste Branch

Dear Dr. Anderson and Ms. Kwan:

Subject: Honolulu Board of Water Supply (BWS) Comments on the Underground Storage Tank (UST) Permit Application for the Red Hill Bulk Fuel Storage Facility (Red Hill), Joint Base Pearl Harbor Hickam (JBPHH), Oahu, Department of Health (DOH) Facility ID NO. 9-102271

The BWS has reviewed the April 12, 2019 DOH response (DOH, 2019) to the United States Department of the Navy's (Navy) March 13, 2019 permit application (Navy, 2019a) and the Navy's May 15, 2019 revised permit application (Navy, 2019b), and offers the following comments.

Based on the permit application and the information available to the BWS for review currently, the Red Hill tanks do not satisfy the mandate of Hawaii Revised Statutes Section 342L-32(b) that all USTs and UST systems must "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" and do not meet any of the enumerated requirements in Hawaii Administrative Rules (HAR) Section 11-280.1-20(b) for corrosion protection. Accordingly, the BWS believes that it is not appropriate for the DOH to issue an operating permit for the existing field-constructed USTs at Red Hill. Instead, the Red Hill tanks should be relocated away from the sole source groundwater aquifer that nourishes Oahu's drinking water if upgrading the tanks with secondary containment is not feasible.

Attached to this letter are the reference documents that serve as the basis for these comments.

### Corrosion Protection

We are pleased to see that the DOH shares many of the concerns we have regarding the Navy's initial permit application that were raised in our comment letter to Dr. Bruce Anderson dated March 28, 2019 (BWS, 2019c), including deficiencies related to corrosion protection, containment materials, and release detection. However, our principal concern remains: neither the original permit application nor the revised version satisfy the requirements of Chapter 11-280.1 of the HAR with respect to corrosion protection. Nothing in the Navy's initial permit application, the DOH's response, or the Navy's revised permit application alleviates this concern.

In its original application, the Navy stated that the Red Hill tanks were exempt from the prescribed methods of corrosion protection by determination of a corrosion expert (Section E of the application). Notwithstanding the Navy's reference to the Administrative Order on Consent (AOC) process in its application cover letter, the BWS was not (and still is not) aware of any such determination by a corrosion expert. Based on subsequent DOH correspondence and the draft operation permit, it appears that the DOH has rejected the Navy's initial corrosion expert approach but nonetheless effectively waived this essential corrosion protection requirement by indicating that the Red Hill tanks are clad or jacketed with non-corrodible concrete even though it has been conclusively demonstrated that this concrete has not prevented and cannot prevent corrosion during these tanks' operational life as required by Hawaii law. The BWS strongly recommends that the DOH and the Navy revisit this issue for the reasons stated below.

We refer the DOH to HAR Section 11-280.1-21, which prescribes the upgrade requirements for UST systems. Paragraph (a) of this section is key as it requires UST systems with field-constructed tanks installed before the effective date of the current administrative rules, like the Red Hill tanks, to comply with the performance standards in Section 11-280.1-20(b), among others, or be closed. HAR Section 11-280.1-20(b) enumerates the five criteria by which a tank can comply with the performance standards for corrosion protection:

1. The tank is constructed of fiberglass-reinforced plastic;
2. The tank is constructed of steel and cathodically protected;
3. The tank is constructed of steel and clad or jacketed with a non-corrodible material;
4. 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; or
5. The tank 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 1-4.

None of the five allowable corrosion protection alternatives, as stated in the administrative rules, have been met. The first two options are to construct the tanks with non-corrodible material (plastic) or to employ cathodic protection; neither of these apply to the Red Hill tanks. The third option requires that steel tanks be clad or jacketed with a non-corrodible material. This is also not applicable to the tanks at Red Hill, as even the Navy recognizes that the tanks at Red Hill are concrete tanks with steel liners, not steel tanks (Navy, 2016; DOH and EPA, 2017a; EPA and DOH, 2017b; BWS, 2015a). Moreover, the steel liners are not clad or jacketed; rather, they have had concrete cast against the unprotected steel surface. 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 tanks is causing them to corrode. The fourth option is for a "corrosion expert" to determine that the site is not corrosive enough to cause it to have a release due to corrosion during its operating life. The BWS is unaware of any report by a corrosion expert indicating the site is not corrosive enough to cause releases from the Red Hill tanks. Further, the BWS finds it implausible that this condition could be satisfied considering the documented through-wall corrosion at the Red Hill tanks. Nonetheless, this is the option identified by the Navy in its original permit application. It is clear to the BWS, however, that the Navy's reference to the AOC in that application cover letter does not meet this requirement. Finally, the fifth option is for the DOH to independently determine that the existing corrosion protection is no less protective than provided by options 1 to 4 above. The BWS is unaware of any such determination by the DOH. To the extent the DOH has made an independent determination concerning the existing corrosion protection for the Red Hill tanks, the BWS requests that the DOH share its analysis that demonstrates the site is not corrosive to the steel liners.

The DOH response to the application (Page 2, Item 3.a) correctly requests that the Navy uncheck the box indicating that a corrosion expert has made a determination that the site is not corrosive. Without explanation, the DOH goes on to state that the tanks are clad or jacketed with a "non-corrodible material (concrete)", thus appearing to take the position that the corrosion protection for the Red Hill tanks conforms to the third option listed in the administrative rules. The BWS notes that the options for corrosion protection in the permit application form do not include option 3 (clad or jacketed steel tanks) from the administrative rules, that is, there is no check box for steel tanks that are clad or jacketed. Instead the Navy has marked the Section 6.E "Other, please specify" box as "N/A", presumably based on the statement in the DOH response letter.

The BWS strongly disagrees with this application of the administrative rules. The current Hawaii UST regulations largely incorporate material from their federal counterparts and conform with the general organization of the federal rules. The United

States Environmental Protection Agency (EPA) provides a description of clad or jacketed steel tanks conforming to the third option. According to the EPA:

“...The 1988 regulation also allows use of other tank technologies that implementing agencies determine are no less protective of human health and the environment than those listed above. Additional non-corrodible materials are now used as claddings for steel tanks, and they are as effective at preventing corrosion as technologies in the 1988 regulation. **EPA considers a cladding to be a non-corrosive dielectric material, bonded to the steel tank with sufficient durability to prevent corrosion during the tank's life.** EPA did not include jacketed tanks in the 1988 regulation, even though they are no less protective of human health and the environment than technologies listed in the regulation. **EPA considers jacketed to be a non-corrosive dielectric material that: Is constructed as secondary containment (jacketed) around a steel tank; has sufficient durability to prevent corrosion during the tank's life; and prevents a regulated substance released from the primary steel tank wall from reaching the environment.**” 40 CFR Volume 76, No. 223, Parts 280 and 281 (EPA, 2011) (emphasis added).

It is clear to the BWS that the absence of any meaningful corrosion protection for the Red Hill tanks meets neither the letter nor spirit of Hawaii law and its implementing regulations. The Red Hill tanks cannot be clad because the concrete is not of sufficient durability to prevent corrosion during the tanks' operational life. And they cannot be jacketed because the concrete is not of sufficient durability to prevent corrosion during the tanks' operational life and does not prevent releases from reaching the environment. The EPA and DOH agree, stating that “...it is our understanding that the current concrete portions of the tanks are not engineered to be liquid tight.” (EPA and DOH, 2017b). Most importantly, it is undisputed that the steel liners are corroding and leaking, as demonstrated by years of repairs, nondestructive testing, groundwater impact, the condition of steel liner samples (commonly referred to as “coupons”) recently removed from Tank 14, and the 2014 Tank 5 fuel release. Simply put, the BWS does not believe a reasonable determination can be made that the Red Hill tanks are clad and jacketed such that the Red Hill tanks are “protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory” during the tanks' operational life. Accordingly, the DOH should not issue an operating permit for the Red Hill tanks.

### Leak Detection

The Navy states in its cover letter to the permit application that the tank tightness test meets the 0.5 gallon per hour leak rate as specified in HAR Section 11-280.1-43(10)(A) and refers to the *Final 2018 Annual Leak Detection Testing Report of 17 Bulk Field-Constructed Underground Storage Tanks at the Red Hill Fuel Storage Complex* of

January 2019, which is provided as Enclosure 10. The BWS notes that Table 2-1 (Leak Detection Results Summary) within Enclosure 10 is entirely redacted and therefore the BWS cannot confirm if the release detection requirements for the Red Hill tanks has been met. The redaction of the results makes it impossible for either the BWS or any member of the public to determine if the leak detection results do meet the tank tightness testing requirements as the Navy claims. The BWS requests that the DOH provide an unredacted version of this report for the BWS to review.

Even if the new release detection equipment was to be permanently installed in all Red Hill tanks, the Navy is only obligated to perform leak detection testing on a semi-annual basis. Both the Naval Audit Service (BWS, 2017c) and BWS (BWS, 2015b) have previously raised concerns regarding the effectiveness of current leak detection methods in detecting slow, chronic fuel releases. As stated before, BWS continues to strongly urge the Navy to incorporate continuous monitoring of any new technology that allows earlier detection of releases, and in the event the DOH issues the Navy a permit to operate the Red Hill tanks, continuous leak detection should be a permit requirement.

Release Notification

Finally, the BWS requests that, in the event the DOH issues a permit, the DOH add as a condition of the permit that the BWS be notified of any confirmed release at the Red Hill facility by the Navy within 24 hours of the release.

Thank you for the opportunity to comment. If you have any questions, please contact Mr. Erwin Kawata, Program Administrator of the Water Quality Division, at 808-748-5080.

Very truly yours,



ERNEST Y.W. LAU, P.E.  
Manager and Chief Engineer

cc: Mr. Steve Linder  
United States Environmental Protection Agency  
Region 9  
75 Hawthorne Street  
San Francisco, California 94105

Ms. Roxanne Kwan  
Department of Health  
Solid and Hazardous Waste Branch  
2827 Waimano Home Road  
Pearl City, Hawaii 96782

## References

- Board of Water Supply (BWS). 2015a. Subject: August 7, 2015 Meeting Between the Board of Water Supply (BWS), United States Environmental Protection Agency (EPA), and Hawaii Department of Health (DOH) to Discuss BWS Comments to the Proposed Administrative Order on Consent (AOC) and Statement of Work (SOW) on the Red Hill Bulk Fuel Storage Facility. Pages 2 and 3. August 17.
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- Board of Water Supply (BWS). 2016b. Subject: Board of Water Supply (BWS) Comments to the Work Plans Being Developed Under the Red Hill Bulk Fuel Storage Facility Administrative Order on Consent (AOC) Statement of Work (SOW) Sections 2 through 5 and 8. May 27.
- Board of Water Supply (BWS). 2016c. Subject: Board of Water Supply (BWS) Comments to the Work Plans Being Developed Under the Red Hill Bulk Fuel Storage Facility Administrative Order on Consent (AOC) Statement of Work (SOW) Sections 3, Tank Upgrade Alternatives. September 30.
- Board of Water Supply (BWS). 2016d. Subject: Board of Water Supply (BWS) Comments Discussed with the United State Environmental Protection Agency (EPA) and Hawaii Department of Health (DOH) at the October 4 and 5, 2016 meeting to discuss the Work Plans Developed Under Sections 2, 3, 4, and 8 of the Red Hill Fuel Facility Administrative Order on Consent (AOC) Statement of Work. November 4.

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Board of Water Supply (BWS). 2017c. Subject: Letter Dated April 25, 2017 From Read Admiral J.V. Fuller Regarding the Board of Water Supply (BWS) Website Frequently Asked Questions (FAQ) on the Red Hill Bulk Fuel Facility. Memorandum from Ernet Y.W. Lau, PE, Manager and Chief Engineer, BWS to Mr. Roy K., Amemiya, Managing Direction, City and County of Honolulu. May 4. Attachment - Naval Audit Service, 2010. Audit Report N2010-0049, Department of the Navy Red Hill and Upper Tank Farm Fuel Storage Facilities, August 16 (redacted).

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Board of Water Supply (BWS). 2017g. Subject: Red Hill Bulk Fuel Facility Administrative Order on Consent (AOC) – Board of Water Supply (BWS) Comments Regarding the 31 August 2017 AOC Meeting Regarding Tank Upgrade Alternatives, and Quantitative Risk and Vulnerability Assessment. September 12.

Board of Water Supply (BWS). 2017h. Subject: EPA Letter Regarding: Revision to the Conditional Approval of Scope of Work for Destructive Testing Dated May 30, 2017 Submitted to the Regulatory Agencies Pursuant to Section 5.3.2 of the Red Hill Administrative Order on Consent. October 16.

Board of Water Supply (BWS). 2017i. Subject: Approval of Red Hill Administrative Order on Consent (“AOC”) Statement of Work (“SOW”) Section 2.4- Tank Inspection, Repair, and Maintenance (“TIRM”) Procedures Decision Document and Clarifications dated September 5, 2017. October 18.

Board of Water Supply (BWS). 2017j. Subject: Red Hill Bulk Fuel Storage Facility – Tank Upgrade Alternative Decision Process Document Dated September 29, 2017. October 19.

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Board of Water Supply (BWS). 2018a. Subject: Board of Water Supply (BWS) Comments on the Red Hill Administrative Order on Consent (AOC) Statement of Work (SOW) Section 3 Tank Upgrade Alternatives (TUA) Report dated December 8, 2017. February 12.

Board of Water Supply (BWS). 2018b. Subject: Comments on the Michael Baker International’s Report: Test Plan for Evaluating Leak Detection Methods at the Red Hill Bulk Fuel Storage Facility (RHBFSF), Joint Base Pearl Harbor-Hickam, Oahu, Hawaii in support of Administrative Order on Consent (AOC) Statement of Work (SOW) Sections 4.5: New Release Detection Alternatives and 4.6: New Release Detection Alternatives Report. March 23.

Board of Water Supply (BWS). 2018c. Subject: Comments on the Department of the Navy (Navy) Report: Seismic Profiling to Map Hydrostratigraphy in the Red Hill Area, Red Hill Bulk Fuel Storage Facility (RHBFSF) Joint Base Pearl Harbor-Hickam, Oahu, Hawaii, March 30, 2018. Completed under Red Hill Administrative Order on Consent (AOC) Statement of Work (SOW) Sections 6 and 7. April 20.

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Board of Water Supply (BWS). 2019a. Subject: Honolulu Board of Water Supply (BWS) Comments to IMR Test Labs Destructive Analysis of 10 Steel Coupons Removed from Red Hill Fuel Storage Tank #14, REPORT No. 201801967, Dated December 17, 2018. March 5.

Board of Water Supply (BWS). 2019b. Subject: IMR Test Labs Destructive Analysis of ten (10) Steel Coupons Removed from Red Hill Fuel Storage Tank #14, Report No. 201801967, dated December 17, 2018 pursuant to Section 5.3 of the Red Hill Bulk Fuel Storage Facility (RHBFSF) Administrative Order on Consent (AOC) Statement of Work. March 6.

Board of Water Supply (BWS). 2019c. Subject: Underground Storage Tank (UST) Permit Application for Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor Hickam (JBPHH), Oahu, DOH Facility ID NO. 9-102271. March 28.

Board of Water Supply (BWS). 2019d. Subject: Navy testimony regarding Senate Concurrent Resolution 35, March 20, 2019, by Captain M.K. Delao and the Navy's Destructive Testing Report. March 29.

Department of Health (DOH). 2019. Application for an Underground Storage Tank Permit, Red Hill Bulk Fuel Storage Facility, Facility ID No. 9-102271. Letter from Ms. Lene Ichinotubo, PE, Acting Chief, Solid Hazardous Waste Branch, DOH to Ms. Raelynn Kishba, Commander, Navy Region Hawaii. April 12.

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Department of the Navy (Navy). 2019b. UST Permit Application for Red Hill Bulk Fuel Storage Facility, JBPHH, Oahu, DOH Facility ID NO. 9-102271. Submitted to State of Hawaii Department of Health on May 15, 2019, signed by Captain, M.R. Delao, with enclosure Revised DOH Form No. 2, Application for an Underground Storage Tank Permit for Red Hill Bulk Fuel Storage Facility, DOH Facility ID No. 9-102271. May 15.

Environmental Protection Agency (EPA). 2011. Federal Register Volume 76, No. 223. 40 CFR Parts 280 and 281. Revising Underground Storage Tanks Regulations – Revisions to Existing Requirements and New Requirements for Secondary Containment and Operator Training, Proposed Rule. November 18.

Permit No. P-2019-XXX, Dated July XX, 2019, Expiration July XX, 2024, Permittees: Owner Name and Address: US Navy – COMNAVREG HI, 850 Ticonderoga Street, Suite 100, JBPHH, HI 96860 and Operator Name and Address: Naval Supply Systems Command Fleet Logistics Center Pearl Harbor, 1942 Gaffney Street, Suite 100, JBPHH, HI 96860. July XX.





SIERRA CLUB OF HAWAII  
MĀLAMA I KA HONUA. *Cherish the Earth.*

June 18, 2019

Dr. Bruce Anderson, Director of Health  
Department of Health, State of Hawai'i  
P. O. Box 3378,  
Honolulu, Hawai'i 96801

19 JUN 18 P 1:41

RECEIVED  
OFFICE OF THE DIRECTOR  
DEPT OF HEALTH

RE: UST PERMIT APPLICATION FOR RED HILL BULK FUEL STORAGE FACILITY

Aloha e Dr. Anderson,

The Sierra Club requests that the Department of Health schedule a public hearing on the Navy's application of an underground storage tank permit for its facility at Red Hill (ID No. 9-102271). A public hearing will give the applicant and DOH the opportunity to provide baseline information to the public – and give the public an opportunity to outline the deficiencies in the application.

The Sierra Club also urges DOH to deny the application and to consider additional special conditions. By separate letter (complaint), the Sierra Club is also requesting that DOH convene a contested case hearing on the Navy's application.

Pursuant to HRS § 342L-32(b), all underground 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” and “shall be replaced or upgraded not later than December 22, 1998, to prevent releases for their operating life.” A permit can only be granted if doing so would be “protective of human health and the environment.” HRS § 342L-4(c). The Navy's application is deficient in many respects.

#### Incomplete Application

Much information in the permit application is redacted. It is unclear whether DOH has been provided unredacted copies of the reports attached to the application. Not only has the public been deprived of the information that has been redacted, but many of the pages of the reports simply do not exist. They are not even blacked out. Did the Navy provide DOH with all the pages of these reports? *See, e.g.*, pages 1-6, 8 and 10 of the “Final 2018 Annual Leak Detection Testing Report of 17 Bulk Field-Constructed Underground Storage Tanks at Red Hill Fuel Storage Complex” (23 January 2019) (Enclosure 10); pages 1-3 and 7 of the “2019 Annual Static Liquid Pressure Testing Report of Three Sections (20,706 feet) of Petroleum Pier Pipelines” (18, March 2019) (Enclosure 7).

#### Release Detection

In 2008, the Navy commissioned a study on leak detection for the Red Hill facility. “Market Survey of Leak Detection Systems for the Red Hill Fuel Storage Facility, Fleet Industrial Supply Center, Pearl Harbor”: <https://www.boardofwatersupply.com/bws/media/redhill/red-hill-ocr-report-leak-detection-systems-lds-market-survey-redacted-2008-07-03.pdf> That study noted that “one thing has remained constant since these tanks were commissioned in 1943 and that is that the technology available to detect leaks in the tanks still lags behind the required level of measurement needed to protect the groundwater in the aquifer surrounding the tanks.” What has changed since 2008 to give DOH confidence that the Navy can accurately detect releases into the environment?

### Earthquakes

The Navy’s application fails to acknowledge – let alone assess – the risk that earthquakes pose to the Red Hill bulk fuel storage tanks – and therefore to our aquifer. Decades ago, the University of Hawaii’s Environmental Center assessed the risks that earthquakes pose to Honolulu’s built environment. “Reflection of Seismic Risk in the Honolulu Building Code” (June 1989): <https://scholarspace.manoa.hawaii.edu/bitstream/10125/18216/Reflection%20of%20Seismic%20Risk%20in%20the%20Honolulu%20Building%20Code%2C%20Cox%201989.PDF> It determined that it was appropriate to plan for an earthquake of Mercalli intensity of VII -- enough to put cracks into reinforced concrete. The study specifically considered the 90 percent probability of non-exceedence of earthquakes in a 50-year interval. Honolulu has previously faced an earthquake of approximating 6.8 in a magnitude. Given this risk, the Navy should have assessed – and DOH must assess – what kind of damage a 6.8 magnitude earthquake could cause to the tanks and therefore to our aquifer. If the tanks could not survive a repeat of the 1871 Lanai event, they should be decommissioned as soon as possible.

### Corrosion

HAR § 11-200.1-20(b) requires that the tanks be protected from corrosion. The 2018 Destructive Analysis demonstrated that the Navy’s tanks are corroding – and at a rate far more rapidly than the Navy anticipated. It is difficult to comprehend how the Navy’s tanks satisfy HAR § 11-200.1-20(b).

### Leaks

It appears that portions of the UST system are leaking. The “2019 Annual Leak Detection Testing Report of 35 Sections (57,136 Feet) of Petroleum Pipelines” (Enclosure 6) notes that many sections of the system are leaking:

- *Tank 47 - VS 8/9 (285 feet)*
- *Hydrant Issue- Type III PH to IVP 1 and 4 to HSV Issue (5,001 feet)*
- *Hydrant Return- IVP 2 to Type III PH (4,657 feet)*
- *Hydrant Issue - IVP 1 to IVP 2 (7,583 feet)*
- *AMC Hydrant Loop Outlet Row 1 (4,500 feet)*

### Risks

DOH itself has declared that the “storage of up to 187 million gallons of fuel, 100 feet above a drinking water resource, is inherently dangerous.” “Report to the Twenty-Eighth Legislature State of Hawaii 2015 Pursuant to Senate Concurrent Resolution 73 Requesting the Department of Health to Convene a Task Force to Study the Effects of the January 2014 Fuel Tank Leak at the Red Hill Fuel Storage Facility Prepared By: State of Hawaii Red Hill Fuel Storage Facility Task Force” (December 2014). DOH also acknowledged that “the operation of this facility 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 impact to the environment.” *Id.* DOH has admitted that “[n]o underground storage tank or underground storage tank system in Hawai‘i poses as great a threat to groundwater as the underground storage tanks at the Red Hill Fuel Storage Facility.”

It is time for these rusty, antiquated tanks to be retired.

#### Special Conditions

If nevertheless, DOH is bound and determined to grant this permit, it should consider incorporating the following special conditions to any permit it issues:

- By June 1, 2024, the Navy shall provide DOH its plan to relocate the Red Hill Bulk Fuel Storage Facility.
- By June 1, 2021, the Navy shall provide DOH a risk assessment and plan to address earthquake threats to the Red Hill Bulk Fuel Storage Facility.
- The Navy shall provide through a legal notice an annual report in a newspaper of general circulation that reports on all releases detected at the Red Hill Bulk Fuel Storage Facility the previous twelve months.
- Although this permit expires in 2024, the Navy is hereby notified that after January 1, 2028, no person shall operate an UST system with field constructed tanks mauka of the underground injection control line as that term is defined and used in HAR title 11 chapter 23. No person shall operate an UST system that has the capacity of 100,000 gallons or more mauka of the underground injection control line as that term is defined and used in HAR title 11 chapter 23 after January 1, 2028.

Aloha no,



Martha Townsend  
Director, Sierra Club Hawai‘i Chapter

Cc U.S. Navy