

HB2076

HD1

Measure Title:
RELATING TO DEPLETED URANIUM.

Report Title:
Depleted Uranium; Air Sampling

Description:
Requires the department of health to establish air sampling stations to monitor for levels of depleted uranium. Effective Date July 1, 2020. (HB2076 HD1)

Introducer(s):
EVANS

Current Referral:
HTH/ENE, WAM

LINDA LINGLE
GOVERNOR OF HAWAII



CHIYOME LEINAALA FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

In reply, please refer to:
File:

Senate Committee on Health

Senate Committee on Energy and Environment

HB 2076, HD1 RELATING TO DEPLETED URANIUM

**Testimony of Chiyome Leinaala Fukino, M.D.
Director of Health**

March 19, 2008

1:15 p.m.

1 **Department's Position:** The department supports but has strong reservations regarding this
2 proposal.

3 **Fiscal Implications:** The proposed activities are not budgeted. Cost estimate for implementation is
4 \$1.64 million (See Addendum).

5 **Purpose and Justification:** The bill requires the department of health to collect data on levels of
6 contamination by depleted uranium by establishing air sampling stations located adjacent to and
7 downwind from military facilities in Hawaii where depleted uranium was used.

8 The department supports the continuous air monitoring and routine analysis of samples to
9 identify and quantify any depleted uranium released from military facilities and traveling into adjacent
10 communities. We are happy to consult with qualified experts. We do not see a need to adopt the
11 proposed rules; the department can address the issues of access, standards, and chain of custody with its
12 existing authorities. However, aside from limited air sampling conducted under EPA, there are no funds

1 in the department to implement these activities. Any appropriations should not adversely affect the
2 priorities in the executive supplemental budget priorities.

3 Thank you for the opportunity to testify.

Addendum to
Department of Health
Testimony
on HB2076

BUDGET:

Assume Three Army Posts Requiring Air Monitoring; Five Monitoring Stations Per Post; Air Filter Collection Twice A Week; A Total Of 30 Air Filters Collected Weekly For 52 Weeks Per Year; Total Of 1560 Air Filters Annually. No Accredited Radiochemistry Laboratory In Hawaii To Conduct Analysis; Analysis By A Mainland Laboratory Costs \$1,000 Per Sample;

$3 \text{ Posts} \times 5 \text{ Stations/Post} \times 2 \text{ Collections Weekly} \times 52 \text{ Weeks/Year} \times \1k Per Sample
= \$1.56 Million.

One Radiation Staff Member Will Travel To Kona Weekly.

Travel: $\$150 \text{ Per Week} \times 52 \text{ Weeks} = \$7,800$

Salary for 1 FTE = \$75,000

Grand Total: \$1.64 Million

STATE OF HAWAII
DEPARTMENT OF DEFENSE

TESTIMONY ON HOUSE BILL 2076 HD1
A BILL FOR AN ACT RELATING TO DEPLETED URANIUM

PRESENTATION TO THE
SENATE COMMITTEE ON HEALTH
SENATE COMMITTEE ON ENERGY AND ENVIRONMENT

BY

MAJOR GENERAL ROBERT G. F. LEE
ADJUTANT GENERAL
March 19, 2008

Chair Ige, Chair Menor, and Members of the Committee:

I am Major General Robert G. F. Lee, State Adjutant General. I am testifying on House Bill 2076 HD1. This bill requires the Department of Health to establish air sampling stations to monitor levels of depleted uranium.

We support the intent of House Bill 2076 HD1 so long as it does not replace or adversely impact priorities as indicated in the Executive Supplemental Budget Request.

The United States Army has not shipped, stored, or used any ammunition in Hawaii that contained depleted uranium since 1962. It should be noted that spotting rounds with depleted uranium has been limited to the range impact areas only and not on the maneuver training areas that are used by our soldiers.

Since the discovery of depleted uranium, the U. S. Army has started and continues to monitor and remediate their training areas and weapon ranges. They have been very open in the discussions regarding depleted uranium at the ranges and are working with the State Department of Health, other federal organizations, and have kept our communities informed through town hall and formal meetings.

Additionally, the Department of Health conducted periodic background readings, usually on a monthly basis, in the populated areas around Pohakuloa Training Area, and the readings have been normal.

Chair Ige, Chair Menor, thank you for the opportunity to provide this written testimony.

testimony

From: Joel Fischer [jfischer@hawaii.edu]
Sent: Monday, March 17, 2008 12:31 PM
To: testimony
Cc: senige@capitol.hawaii.gov; Sen. Carol Fukunaga
Subject: HB2076; HTH; 3/19; 1:15; Rm 016

Importance: High

Attachments: Card for Joel Fischer <jfischer@hawaii.edu>



jfischer.vcf (343 B)

HB 2076, HD1, Relating to Depleted Uranium HTH; Chair, Sen Ige

PLEASE PASS THIS BILL.

To date, we have no idea how much depleted uranium there is in our lands and atmosphere. The military consistently has lied about the use of depleted uranium, and we cannot trust them to do the monitoring.

We owe the people of Hawai'i nei a transparent, fair and objective reporting system. We also owe our people the truth about threats to their health.

Thank you for introducing and hearing this important bill.

Aloha, joel

Dr. Joel Fischer, ACSW
President, 19-3, Democratic Party

Professor
University of Hawai'i, School of Social Work Henke Hall Honolulu, HI 96822

"It is reasonable that everyone who asks justice should DO justice."
Thomas Jefferson

"There comes a time when one must take a position that is neither safe, nor politic, nor popular, but one must take it because one's conscience tells one that it is right."
Dr. Martin Luther King, Jr.

"Never, never, never quit."
Winston Churchill

LIFE OF THE LAND

Ua Mau Ke Ea O Ka 'Aina I Ka Pono

The Sovereignty of the Land is Perpetuated in Righteousness

76 North King Street, Suite 203, Honolulu, Hawai'i 96817

Phone: (808) 533-3454 * E-Mail: kat@lifeoftheland.net

VERY LATE TESTIMONY

COMMITTEE ON HEALTH

Sen. David Ige, Chair

Sen. Carol Fukunaga, Vice Chair

COMMITTEE ON ENERGY & ENVIRONMENT

Sen. Ron Menor, Chair

Sen. Gary Hooser, Vice Chair

Wednesday, March 19, 2008

1:15 p.m.

Room 016

SUPPORT HB 2076 HD1 - DEPLETED URANIUM

Aloha Chairs Ige and Menor and Members of the Committees!

Life of the Land, Hawai'i's own environmental and community action group advocating for the people and the `aina since 1970. Our mission is to preserve and protect the life of the land through sustainable land use and energy policies and by promoting open government through research, education, advocacy, and litigation.

HB 2076 HD1 requires the department of health to establish air monitoring sampling stations to monitor for levels of depleted uranium.

Life of the Land supports this measure. We have served on military restoration advisory boards (RABs) for 10 years, including

- Army Schofield Barracks Technical Review Committee
- Air Force Hickam Restoration Advisory Board
- Air Force Central O`ahu Restoration Advisory Board
- Navy Pearl Harbor Restoration Advisory Board

We know something about the impact the military has had on Hawai'i and the contamination that they have left behind.

Why are people worried about depleted uranium? Well, below is a short explanation of what it is, what it does and how it spreads. Life of the Land's interest was heightened when we received resistance to the questions we asked at the RAB meetings. There is plenty of contamination that we don't know about...and plenty the military doesn't know about either...and you can bet that there is plenty that they're just not talking about.

To quote the poet Arundhati Roy:

*"I think my eyes were knocked open and they don't close.
I sometimes wish I could close them and look away...
But once you've seen certain things, you can't un-see them,
and seeing nothing is as political an act as seeing something."*

Below is a short primer on depleted uranium – which has a radioactive half life of 4.7 billion years. Yes that was **BILLION**. (Source: http://seattlepi.nwsourc.com/national/133581_du04.html)

WHAT IT IS:

Depleted uranium is a highly dense, toxic and radioactive metal that is the byproduct of the process during which fissionable uranium used to make nuclear bombs and reactor fuel is separated from natural uranium. The U.S. uses it for bullets and shells.

WHAT IT DOES:

Depleted uranium contains the highly toxic U-238 isotope, which has a radioactive half-life of about 4.5 billion years. As U-238 breaks down, an ongoing process, it creates protactinium-234, which radiates potent beta particles that may cause cancer as well as mutations in body cells that could lead to birth defects.

HOW IT SPREADS:

When a depleted uranium round hits a hard target, as much as 70 percent of the projectile can burn on impact, creating a firestorm of depleted uranium particles. The toxic residue of this firestorm is an extremely fine insoluble uranium dust that can be spread by the wind, inhaled and absorbed into the human body and absorbed by plants and animals, becoming part of the food chain. Once in the soil, it can pollute the environment and create up to a hundredfold increase in uranium levels in ground water, according to the U.N. Environmental Program.

Life of the Land and many people in Hawai'i are concerned that the Army is working on the largest military build-up since World War II. For years they have ignored the environment and dumped their opala and who knows what else – toxic and nontoxic – into our gulches.

The Army, even today, has a policy not to clean up ranges – where live fire is used in practice. In fact, in the 2004 Environmental Impact Statement for the Stryker Brigade, they actually said that if a range become too contaminated, they would find other land. What about the people of this land – the ones who will be here when they leave? What about our children?

So experience has taught us that depleted uranium is an issue that the military does not want to address. In fact, the military has consistently insisted that depleted uranium has never been used in Hawai'i.

In an e-mail reply from the Army, when questioned by a resident asking if depleted uranium was ever used in Hawai'i:

In a message dated 5/26/04 1:45:22 PM Hawaiian Standard Time,
Cindy.S.Barger@poh01.usace.army.mil writes:

Subj: RE: Army announces the release of the SBCT Final EIS :

Date: 5/26/04 1:45:22 PM Hawaiian Standard Time

From: Cindy.S.Barger@poh01.usace.army.mil (Barger, Cindy S POH) :

To:

CC: WilliamsJC@schofield.army.mil (LTC John Williams)

I checked with one of our specialists on unexploded ordnance and depleted uranium. He informed me that **there is no record of depleted uranium being used in Hawai'i**. Interesting fact I just learned, I guess there were only something like 1,000 DU ordnances ever made and they weren't typically used for training activities because they were so destructive (can only train in an area once) so they usually used "duds" of some sort instead.

Hope that helps.

Cindy

The March 2005 Draft Environmental Impact Statement for Makua denies the use of depleted uranium weapons in Hawai'i.

But recent discoveries have proven this to be untrue.

A January 6, 2006 Honolulu Advertiser Article entitled, "Schofield uranium find prompts call for probe" reported, A Sept. 19 e-mail message from Samuel P. McManus of the U.S. Army Engineering and Support Center in Huntsville, Ala., to Ronald Borne, an Army employee involved with preparations for the Stryker brigade at Schofield Barracks. The e-mail involved the high cost of unexploded ordnance removal in preparation for the construction of a new Stryker brigade battle area complex at Schofield. In the e-mail, McManus noted, *"We have found much that we did not expect, including the recent find of depleted uranium."*

The article went on to say, The Army confirmed yesterday that in August, 15 tail assemblies from spotting rounds made of D-38 uranium alloy, also called depleted uranium, were found by Zapata Engineering while the contractor was clearing a range area of unexploded ordnance and scrap metal. The tail assemblies are remnants from training rounds associated with an obsolete weapon system that was on O'ahu in the 1960s, and their low-level radioactivity represents no danger, the Army said.

The Army also stated that other than the armor-piercing rounds for the Abrams tank and Bradley fighting vehicle, there are no other weapons in its current stockpile that use depleted uranium. "There is no record of the Abrams and Bradley DU rounds ever being stockpiled in Hawai'i or being fired on Army ranges in Hawai'i," the statement said.

The 15 tail assemblies recovered have been triple-bagged, stored in metal containers and secured pending disposition instructions, the Army said.

The Army statement was issued several hours after a DMZ Hawai'i/Aloha 'Aina news conference announcing the e-mail findings, which was attended by representatives of six groups and concerned residents.

Depleted uranium munitions have raised concerns because they generate aerosolized particles on impact that can lead to lung cancer, kidney damage and other health problems.

Committee members, more and more research is coming out on depleted uranium and its long term effects on people. Think of our soldiers breathing in the dust, think of the Iraqi people, whose water, air and soil is contaminated with tons of depleted uranium stockpiles left by the U.S. military, think of the children of returning soldiers, think of Iraqi mothers giving birth to children with severe deformities.

The testing asked for in this bill is to protect the health and safety of the people of Hawai'i. We know that it is impossible to comprehend 4.7 BILLION YEARS. But we are asking that you good people err on the side of caution. The Army has repeatedly said that they have no record of depleted uranium being used in Hawai'i. Well, we know that myth has been blown out of the water.

At an informational briefing on January 17, 2008, the Army said they were concerned about the 'speculation' and 'misinformation' about DU. They said that the Army has not been permitted to use DU since 1996 (new story) and they have no intention of using it now. They confirmed what the community reported in January 2006 from filing a Freedom of Information Act request – that the DU at Schofield and Pohakuloa was from the Davey Crockett munitions.

Army records show that 714 rounds containing DU were shipped to the islands in 1962. A little under 300 pounds of DU is at Schofield and Pohakuloa.

The Army is taking this seriously and Tad Davis has put together a 'First class strategy' with the goals of being transparent and accountable. The strategy is:

1. Archival research (500 pages confirmed 714 rounds shipped to Islands)
2. Scoping survey
3. Characterization survey to determine the scope of the problem
4. Baseline human health risk assessment
5. Remediation plan

DU found in 2 areas of Schofield and 4 areas at Pohakuloa. The field work is 'wrapped up', the labs are producing reports, involved agencies are doing their reports and the Army wants to get the results to the Nuclear Regulatory Commission for risk assessment.

Ken Rubin, a Volcanologist at UH Dept. of Geochemistry is doing report.

The Army is working on a plan for persistent monitoring at Pohakuloa. They want an integrated system to address concerns.

The Army reiterated that they do NOT currently use DU weapons.

This statement is important to remember in light of the numerous denials over the years that DU was ever used in Hawai'i.

The community's concerns are heightened by the construction at both Schofield and Pohakuloa as well as the ongoing bombing at Pohakuloa and the threat of toxic fugitive dust being inhaled. What is all this new activity stirring up?

The citizens of Hawai'i earnestly hope that the Legislature will hold the Army to their word to be 'transparent and accountable'.

Mahalo for allowing us to submit testimony supporting HB 2076 HD1.

**TESTIMONY BEFORE THE SENATE HEALTH COMMITTEE
RELATED TO H.B. 2076, H.D. 1**

March 19, 2008

Chairman Ige, Members of the Committee, I am Dr. James W. Morrow. Since it has been at least 15 years since I last testified at a legislative hearing, allow me to very briefly give you some background about myself. My education and degrees are in biochemistry and public health science. I have been in the air quality and air pollution control business in Hawaii since 1974 working throughout the Pacific area doing air quality impact analyses, air permitting, air monitoring, and assisting governments establish air pollution control programs. During the 1980's and early 1990's, I served on the State's Environmental Quality Commission, Environmental Council and Department of Health Air Advisory Committee. Until its closure in 2000, I was also on the clinical faculty at the UH School of Public Health, lecturing on air pollution health effects and lung disease.

My testimony today is solely on my own behalf and not on behalf of any of my current or former clients or employers. I would now like to offer the following comments and suggestions regarding the nature of uranium in the air environment and its potential health effects as they relate to H.B. 2076, H.D. 1

Uranium occurs naturally in the environment. During the late 1980's and early 1990's, we conducted a multi-year study of the volcanic aerosol ("VOG") on the Big Island. Hundreds of air samples were collected at Hilo, Captain Cook and Kalapana. These samples were analyzed for their chemical content including uranium which was found at very low levels [less than 0.001 microgram per cubic meter of air]. For comparison, the World Health Organization guideline for long-term exposure to uranium is one (1) microgram per cubic meter of air which is intended to protect the public from the chemical effects of uranium. The WHO also has a radiation guideline for uranium which is a dose not to exceed 100 millirem per year above the normal background level. Based on our VOG studies, the background dose due to naturally occurring uranium at those Big Island areas would be less than 1 millirem per year. The WHO does not distinguish between natural uranium and depleted uranium (DU) in setting its guidelines because chemically, uranium is uranium and DU is only different in that it is less radioactive.

In order to assess the potential health impacts of the 714 DU-containing M-101 spotter rounds that the Army reported had been brought into Hawaii in the 1960's, we conducted a computer modeling analysis using the EPA model that has been used for many years in permitting air pollution sources throughout the U.S. This was a "worst case" analysis in which 100 of those DU rounds were assumed to be located at a single spot in the Pohakuloa Training Area (PTA) impact zone and struck by a high explosive munition that aerosolized all the rounds. In other words, those 100 rounds were converted into a cloud of inhalable sized particles of DU. The model then dispersed that cloud downwind under artificially adverse meteorological conditions. This explosion and dispersion were assumed to occur once per day for one year. The maximum annual average DU concentration was computed at 966 receptor sites along the PTA boundary. The result was that the maximum annual DU concentration found at any one site on the PTA

**TESTIMONY BEFORE THE HOUSE FINANCE COMMITTEE
RELATING TO H.B. 2076
February 25, 2008**

boundary was 0.25 microgram per cubic meter of air. Annual radiation dose at this level is estimated at less than 20 millirem.

From these "worst case" results we conclude that it is highly unlikely that the DU rounds which may be remaining in the PTA impact zone will have any significant effect on ambient air quality beyond the PTA boundaries. Under more realistic conditions the DU will be at much lower concentrations and simply become a less radioactive part of the naturally occurring uranium, i.e., it will be lost in the background. And, needless to say, such levels would be well below the one (1) microgram per cubic meter WHO guideline for public health protection.

I would also advise you that we have been conducting baseline air quality monitoring in the PTA area since early 2006. The sample filters have been carefully controlled, accompanied by chain-of-custody forms and have been archived at the mainland laboratory that initially provided them. When the Army's DU investigation team discovered this, we were asked to provide filters for DU analysis. Over 400 filters have been recently transferred to another independent laboratory for uranium analysis.

In conclusion, the naturally low uranium levels measured in the air at Hilo, Kalapana and Captain Cook suggest that the DU fragments at PTA, which have been there for 40+ years, have not had a significant effect on air quality. This finding is consistent with our computer modeling analysis which suggests that the DU would have an insignificant impact on air quality even at the PTA boundaries. And given that DU is 40% less radioactive than naturally occurring uranium, radiation would appear to be a non-issue as well.

Finally, the DOH stated at the House Finance Committee hearing that it is in the process of establishing several monitoring sites in an effort to measure uranium levels. In light of all of the foregoing, we believe this bill is unnecessary and should not be enacted.

Thank you for the opportunity to present my views.

James W. Morrow, DrPH
(808) 942-9096
(jwmorrow@att.net)

testimony

From: Jeff Sacher [jsacher@kona.net]
Sent: Tuesday, March 18, 2008 5:55 PM
To: testimony
Subject: HB 2076 RELATING TO DEPLETED URANIUM

Dear Representative Evans,

I agree that the department of health needs to establish air sampling stations to monitor for levels of depleted uranium. However, an effective date of July 1, 2020 is far too late. Stations need to be set up immediately. In addition, these stations need to also be monitored by independent sources in conjunction with DOH.

Mahalo,
Jeff Sacher
Kawaihae, Big Island
808-936-9983

testimony

From: Joan Conrow [joanconrow@hawaiiantel.net]
Sent: Wednesday, March 19, 2008 10:03 AM
To: testimony
Subject: HB 2076

Committee on Health
Committee on Energy and Environment

Dear Senators:

I am writing to express my support for HB 2076. I believe it's important for the state to assume the responsibility for monitoring depleted uranium and not depend on the military for reports.

Please move up the effective date from 2020. We need this monitoring to begin immediately.

Sincerely,
Joan Conrow