

I.

Reply 11/9/09

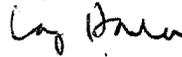
PO Box 10265
Hilo, Hawai'i 96721
October 9, 2009

U.S. Nuclear Regulatory Commission (NRC)
Office of the Secretary of the Commission
Rulemakings & Adjudications Staff
Mail Stop O-16C1
Washington, DC 20555-0001

Dear NRC staff,

Enclosed are my REQUEST FOR EXEMPTION FROM ELECTRONIC FILING and REQUEST FOR EXTENSION OF TIME TO FILE A REQUEST FOR HEARING AND PETITION FOR INTERVENTION. Thank you for your attention to these requests.

Sincerely,



Cory Harden

cc.

Office of Commission Appellate Adjudication, NRC
Catherine Scott, Kimberly Sexton, and Brett Klukan at Office of the General Counsel, NRC
David Howlett, U.S. Army Installation Command, Arlington, VA
Jim Albertini, Malu Aina

REQUEST FOR EXEMPTION FROM ELECTRONIC FILING

I request an exemption, under 10 CFR 2.302 paragraph (g) (3), from electronic formatting and electronic transmission, because when I tried to do this while representing Sierra Club, it became extremely time-consuming.

- I tried to download the format viewer, but screen messages said it would take 4 to 8 hours on my dial-up connection. The connection sometimes fails if a telephone call comes in, or if I don't tap a key every 10 minutes. Then I have to start over. NRC technical support said they would bring this up at staff meeting and get back to me with possible solutions, but I haven't heard back yet.
- To submit documents in the required PDF format, I would have to drive 30 miles round trip to a computer service store.
- I spent an hour or so on the computer and with NRC technical support trying to get a digital ID, but it still didn't come in correctly.

October 9, 2009

In the matter of)	
)	
U.S. ARMY INSTALLATION COMMAND)	Docket No. 40-9083
)	
(Depleted Uranium at Pohakuloa Training)	
Area & Schofield Barracks, Hawai'i))	

CORY HARDEN'S REQUEST FOR EXTENSION OF TIME TO FILE
A REQUEST FOR HEARING AND PETITION FOR INTERVENTION

INTRODUCTION

I hereby request an extension of time for the public to file a request for hearing and petition for intervention until 60 days after certain documents are made available on ADAMS (Agency-Wide Document Access and Management System on NRC's website.)

DISCUSSION

"The U.S. Army Installation Command submitted to the NRC a license application ("Application") (ADAMS Accession No. ML090070095) requesting authorization to possess depleted uranium at two sites in Hawaii, Schofield Barracks on Oahu and Pohakuloa Training Area on the Big Island of Hawaii. On August 13, 2009, a notice of opportunity to request a hearing or petition for intervention was published in the Federal Register, setting the deadline for such as October 13, 2009." [copied from October 1, 2009 NRC staff response to Sierra Club's motion for extension of time to file comments, a request for hearing and petition for intervention] [1]

FURTHER DISCUSSION RE. REQUIREMENTS LISTED IN AUGUST 12, 2009 FEDERAL REGISTER NOTICE NRC-2009-0352:Docket No. 40-9083**

1. The name, address, and telephone number of the requester;
Cory Harden, PO Box 10265, Hilo, Hawai'i 96721 808-968-8965 mh@interpac.net
I am filing as an individual, not representing Sierra Club, though I include information from occasions when I was representing Sierra Club.
2. The nature of the requester's right under the Act to be made a party to the proceeding;
Residency on Hawai'i Island, where some of the depleted uranium (DU) spotting rounds were used

3. The nature and extent of the requester's property, financial or other interest in the proceeding;
See #2

4. The possible effect of any decision or order that may be issued in the proceeding on the requester's interest;

If Hawai'i Island residents have fuller knowledge about when, where, and how the spotting rounds were used, they will be able to make more meaningful comments to NRC on its decisions about conditions to write into the Army DU license

5. The circumstances establishing that the request for a hearing is timely in accordance with 10 CFR 2.309(b).

This request is being mailed by the due date of October 13, 2009.

1. Provide a specific statement of the issue of law or fact to be raised or controverted;

I request that the 60-day deadline to file a request for hearing and petition for intervention be re-set after two documents are made publicly available on ADAMS (Agency-Wide Document Access and Management System on NRC's website.)

The documents are (1) the Archives Search Report (ASR) and (2) an official Army document stating the decision not to do a Human Health Risk Assessment (HHRA) for Pohakuloa, and giving the scientific basis for this decision.

Since these two documents are not readily available alongside related documents on ADAMS, the public is prevented from making informed decisions about filing requests for hearing and petitions for intervention, and from making informed comments on the application.

2. Provide a brief explanation of the basis for the contention;

Re. ASR

A. The ASR may help resolve contradictory statements about the number of spotting rounds at Pohakuloa and in Hawai'i. If the number is 2050 at Pohakuloa alone, not just 714 statewide, very different conditions may eventually be written into the Army DU license. Here are the contradictory statements:

Army

"U.S. Army Colonel Killian...said the types of exercises conducted at PTA (Pohakuloa Training Area) would require the firing of at least 2,050...spotting rounds." [Depleted Uranium at Pohakuloa, West Hawai'i Today, 2-4-09] [2]

'The 2,050 figure was based on old training manuals, which specify how many rounds soldiers had to shoot to be qualified on the weapon system.' [from my notes--re. Col. Killian's presentation to Hawai'i County Council 2-3-09 and conversations with him that day] [3]

"The Army agrees it is theoretically possible to have fired up to 2,520 rounds on training ranges in Hawaii. This includes both Schofield and Pohakuloa ranges. However, shipping records have accounted for all, but 20 of the rounds. Therefore, it is reasonable to assume that only a total of 714 rounds were fired in Hawaii. (Note: the below extract from the Archives Search Report includes a plausible explanation for the reason that fewer rounds may have been fired in Hawaii.)

'Total rounds verified shipped from Oahu from Lake City Ordnance Plant were 714 rounds on 27 April 1962. Notice this date coincides with the first weapons arriving at Oahu in the spring of 1962. As discussed in Section 8.1, this original shipping quantity is not close to the "worst case scenario" estimate of usage for six years with 14 weapons (2,520 rounds.) This shipping quantity averages only 8.5 rounds fired per year per weapon. It is highly probable that additional stocks of the Cartridge, 20 mm Spotting M101 were order from one of the Ordnance

Depots (Letterkenny or Pueblo) during the six active years of the Davy Crockett Weapon System in Hawaii.' "

["Sierra Club's concerns--1" in letter from Army to U.S. Rep. Mazie Hirono, dated about May 20, 2009] [4]

Sierra Club

"I have estimated that up to 120 to 2,000 spotting rounds were fired on the PTA. [Pohakuloa Training Area]...I would use the upper end of this range..." [Number of Spotting Rounds section in "Independent Review of Pohakuloa: Depleted Uranium from the Davey [sic] Crockett Weapon System" by Peter Strauss] [5]

"An environmental consultant [Peter Strauss, hired by Sierra Club] estimated there may be as many as 2,000 depleted uranium rounds at Pohakuloa Training Area...The consultant's analysis was based on an Army report estimating that between 120 and 400 firing pistons are scattered around impact ranges at PTA...Each piston would have fired up to five of the DU rounds, for a total of between 600 and 2,000 rounds fired, Strauss said."

[Sierra Club consultant disputes Army's DU tally, Hawaii Tribune-Herald, 8-26-08] [6]

B. The ASR seems to provide a basis for determining the number of spotting rounds and where they were shipped worldwide. ["Army Archive Search Report Results" on "Accounting of M101 Spotting Rounds" page in "Hawaii Island Depleted Uranium Update" handout that accompanied Army Colonel Killian's presentation to Hawaii County Council, February 3, 2009] [7]

C. A title that seems to refer to the ASR [8] appeared on the Army DU website about October 7, 2009, but when I try to download the report I get an error message. [9]

D. I made many attempts--some listed below--to obtain the ASR through Sierra Club.

In December 2008, I filed a Freedom of Information Act Request [10] for the ASR with the Army.

In May 2009 I phoned Anna Tarrant with the Army Directorate of Human Resource in Honolulu.

On July 7, 2009, at a meeting of the Pohakuloa Citizen Advisory Group which I attended by phone, I asked Commander Warline Richardson to obtain the report, and she said she would try.

At NRC's August 27, 2009 meeting in Hilo, Greg Kompf, who I believe is a radiation specialist based in Washington, D.C., promised to send me the report.

On September 22, 2008, John Hayes of NRC e-mailed me that Sierra Club must contact Office of the Secretary re. my request to extend the deadline for 60 days after the ASR appeared on ADAMS. [1--see Attachment 1]

On September 26, 2009, Addison Davis, Deputy Assistant Secretary of the Army, Environment, Safety, and Occupational Health, e-mailed that he would try to get the report. [11]

Re. Pohakuloa HHRA

The Army said they would do a full HHRA, then said they'd do a modified HHRA, then said they wouldn't do any HHRA. But I have not seen an official explanation of the scientific basis for this change in any documents on ADAMS or the Army DU website.

A. Reference to a full HHRA

"Plan--archive research...scoping...characterization survey...health risk assessment published" [from my notes on the Army presentation at the Kawaihae Local Resource Council meeting November 18, 2007, Waimea, Hawaii Island] [12]

B. Reference to a modified HHRA

"Modified Risk Assessment anticipated by APR 09"

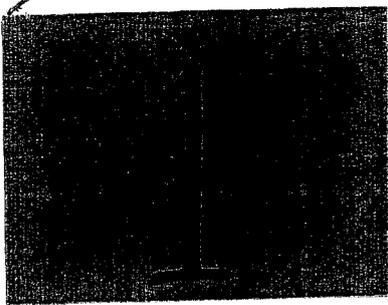
[from "Project Current Status" page of "Hawai'i Island Depleted Uranium Update" handout that accompanied Army Colonel Killian's presentation to Hawai'i County Council, February 3, 2009] [13]

C. Reference to no HHRA

"Greg Kompf of the Army...indicated there is not going to be a HHRA report performed because of the limited amount of DU identified at Pohakuloa." [9-9-09 e-mail to me from John Hayes] [14]

"Pohakuloa Human Health Risk Assessment- It is my understanding from the Department of the Army that no health report would be generated which would address this topic because of lack of depleted uranium data from Pohakuloa. This information was also presented during our meeting with the Army the week of August 24, 2009. The report is not part of the license application." [1-- Attachment 3--affidavit of John Hayes]

3. Demonstrate that the issue raised in the contention is within the scope of the proceeding;
See #2
4. Demonstrate that the issue raised in the contention is material to the findings that the NRC must make to support the action that is involved in the proceeding;
See #2
5. Provide a concise statement of the alleged facts or expert opinions which support the requester's/petitioner's position on the issue and on which the requester/petitioner intends to rely to support its position on the issue;
See #2
6. Provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. This information must include references to specific portions of the application that the requester/petitioner disputes and the supporting reasons for each dispute, or, if the requester/petitioner believes the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the requester's/ petitioner's belief.
See #2



October 1, 2009

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)	
)	
U.S. ARMY INSTALLATION COMMAND)	Docket No. 40-9083
)	
(Depleted Uranium at Pohakuloa Training)	
Area & Schofield Barracks, Hawai'i))	

NRC STAFF'S RESPONSE TO SIERRA CLUB'S
MOTION FOR EXTENSION OF TIME TO FILE COMMENTS,
A REQUEST FOR HEARING AND PETITION FOR INTERVENTION

INTRODUCTION

Pursuant to 10 C.F.R. § 2.232(c), the NRC staff ("Staff") hereby responds to the motion for extension of time to file comments, a request for hearing and petition for intervention ("Motion") tendered by Ms. Cory Harden on behalf of the Moku Loa Group of the Sierra Club ("Sierra Club").¹ For the reasons set forth below, the Motion should be denied in so far as it requests an extension of time until 60 days after certain documents are made publicly available. The Staff, however, does not oppose a two week extension of time, until October 27, 2009, for the Sierra Club to file a request for hearing or petition for intervention.

DISCUSSION

The U.S. Army Installation Command submitted to the NRC a license application ("Application") (ADAMS Accession No. ML090070095) requesting authorization to possess depleted uranium at two sites in Hawaii, Schofield Barracks on Oahu and Pohakuloa Training

¹ The Motion is enclosed as Attachment 1. By email dated September 27, 2009 (Attachment 2), Mr. Jim Albertini requested an extension of time for the same reasons as expressed in the Motion. Mr. Albertini's request is identical to that of the Sierra Club. The Staff does not oppose a two week extension of time for Mr. Albertini to file a request for hearing or petition for intervention.

Area on the Big Island of Hawaii. On August 13, 2009, a notice of opportunity to request a hearing or petition for intervention was published in the Federal Register, setting the deadline for such as October 13, 2009.² In its Motion, the Sierra Club requests that the deadline for filing comments and for filing a request for hearing and petition for intervention be stayed until 60 days after three specified reports are made publicly-available on ADAMS.³ The reports are listed by the Sierra Club as the "Archives Search Report," the "Pohakuloa Characterization Report" and the "Pohakuloa Human Health Risk Assessment."⁴ According to the Sierra Club, because these reports are not publicly available in ADAMS, "the public cannot incorporate information from the reports into decisions on whether to file for hearing..."⁵

The specified reports are not part of the Application.⁶ Based on information available to the Staff, the first report, the "Archives Search Report," exists; however, the report was not received as part of the Application, nor is it currently in the possession of the NRC.⁷ While the Staff is in possession the second report, the "Pohakuloa Characterization Report," this report was not received by the NRC as part of the Application.⁸ The Staff understands that with respect to the third report, the "Pohakuloa Human Health Risk Assessment," the Army Installation Command does not intend to prepare such a report and, as such, the report is

² Notice of License Application Request of U.S. Army Installation Command for Schofield Barracks, Oahu, HI and Pohakuloa Training Area, Island of Hawaii, HI; and Notice of Opportunity for Hearing, 74 Fed. Reg. 40,855 (Aug. 13, 2009).

³ Motion at 2.

⁴ *Id.*

⁵ *Id.*

⁶ Affidavit of John Hayes Executed on September 30, 2009 (Attachment 3).

⁷ *Id.*

⁸ *Id.* at 1-2.

not, nor will be, in existence.⁹

The Staff submits that the Sierra Club should not be granted an indefinite period of time to file its hearing request or petition for intervention until the documents it seeks become available to it. The Commission's adjudicatory procedures require that any person "who desires to participate as a party must file a written request for hearing and a specification of the contentions which the person seeks to have litigated in the hearing."¹⁰ Contentions must be "based on documents or other information available at the time the petition is to be filed..."¹¹ Therefore, the fact that the Sierra Club does not have access to the specified reports does not constitute a cognizable impediment to the filing of a request for hearing or petition for intervention pursuant to the Commission's adjudicatory procedures.¹² Furthermore, as two of the specified reports are not in the possession of the NRC and one of those reports does not exist, there is no way to know how long a deadline would need to be stayed. Thus, to the extent that the Motion seeks an extension of time following the public availability of certain documents, it should be denied.¹³

The Staff, however, does not oppose a two week extension of time, until October 27, 2009, for the Sierra Club to file a request for hearing or petition for intervention.

⁹ *Id.* at 2.

¹⁰ 10 C.F.R. § 2.309(a).

¹¹ *Id.* at § 2.309(f)(2).

¹² The Sierra Club, however, could be able to demonstrate the timeliness of a request for hearing or petition for intervention after the deadline for such has passed, if the specified reports, when made available, contain new information materially different from that previously available to the public and other required showings are made. *See id.*

¹³ The Federal Register notice of an opportunity for hearing did not establish a deadline for filing comments to the NRC. *See* Notice of Opportunity for Hearing, 74 Fed. Reg. at 40,855. In fact, comments will be accepted at any time and may be addressed to John Hayes, Project Manager, at John.Hayes@nrc.gov.

Executed in Accord with 10 CFR 2.304(d)

Brett Michael Patrick Klukan
Counsel for the NRC Staff
U.S. Nuclear Regulatory Commission
Mail Stop O-15 D21
Washington, DC 20555-0001
(301) 415-3629
Brett.Klukan@nrc.gov

Dated at Rockville, Maryland
this 1st day of October, 2009

Attachment 1

From: Cory (Martha) Harden [mh@interpac.net]
Sent: Tuesday, September 22, 2009 2:35 PM
To: Docket, Hearing
Subject: extend due date for docket # 40-9083

To NRC Office of the Secretary,

We are requesting extension of the due date for docket # 40-9083 . Please see messages below.

Thank you,

Cory Harden
Sierra Club, Moku Loa group
Box 1137
Hilo, Hawai'i 96721
808 968 8965
mh@interpac.net

----- Original Message -----

From: ~~Hayes, John~~
To: Cory (Martha) Harden
Cc: Jim Albertini
Sent: Tuesday, September 22, 2009 8:53 AM
Subject: RE: request extending due date

Ms. Harden,

Thank you for your email of last week. A request for an extension to the date for filing a request for hearing needs to be submitted to the NRC's Office of the Secretary. That address is listed in the August 13, 2009 Federal Register Notice (FRN) on the proposed action involving the Army. A copy of the FRN is attached. I have no authority regarding such an extension.

Regards,

Jack

From: Cory (Martha) Harden [mailto:mh@interpac.net]
Sent: Friday, September 18, 2009 4:43 PM
To: Hayes, John
Subject: request extending due date

MEMO

TO Jack Hayes, Project Manager for Depleted Uranium (DU) in Hawai'i, Nuclear Regulatory Commission (NRC)

FROM Cory Harden, Sierra Club, Moku Loa group

Jack Hayes,

We are writing to request that you extend the October 13 due date for filing for hearing, and submitting comments, on the Army license for depleted uranium (DU) in Hawai'i.

We ask for a due date of 60 days after these reports appear on ADAMS (Agency-Wide Document Access System on NRC's website)

Archives Search Report (ASR)

Pohakuloa Characterization Report

Pohakuloa Human Health Risk Assessment, or official document stating it will not be done and why

These reports are not on ADAMS yet, so the public cannot incorporate information from the reports into decisions on whether to file for hearing, and into comments which would help ensure that all relevant issues are considered.

Earlier, you e-mailed that the ASR will be available on the Army DU website. But we feel it should be on ADAMS because-

in nine months, the Army has not fulfilled a Sierra Club Freedom of Information Act (FOIA) Request for the ASR, though we followed up several times with the Army and U.S. Representative Mazie Hirono.

the ASR seems to provides a basis for assumptions in later reports (scoping, characterization, and human health risk assessment) about when, where and how the DU spotting rounds were used

Thank you for considering our request.

Cory Harden
Sierra Club, Moku Loa group
PO Box 1137
Hilo, Hawaii 96721
808-968-8965 mh@interpac.net

Attachment 2

From: Jim Albertini [mailto:JA@interpac.net]
Sent: Sunday, September 27, 2009 3:13 PM
To: Hayes, John
Cc: Cory (Martha) Harden; Hearing.dockett@NRC.Gov
Subject: Re: request extending due date

Mr. Hayes and Mr. NRC Secretary.

I am a citizen trying to protect the public health and safety of the people of Hawaii from U.S. military radiation contamination.

I am on record requesting a similar extension as Ms. Harden for the reasons she states below.

I re-read the Federal registry notice. Your legaleese is stacked against citizen involvement. I am a farmer in the rainforest of Hawaii with no access to high speed internet that is necessary to access documents (currently not available at all) and file for electronic hearings. Your system does not provide for equal access to justice under the law, yet we the citizens are paying for this ridiculous electronic system to be used against us. Shame on you for being a party to such injustice.

Jim Albertini, president

Malu 'Aina Center for Non-violent Education & Action

P.O.Box AB

Kurtistown, Hawai'i 96760

phone: 808-966-7622

email: JA@interpac.net

Visit us on the web at: www.malu-aina.org

Attachment 3

October 1, 2009

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)

U.S. ARMY INSTALLATION COMMAND)

Docket No. 40-9083

(Depleted Uranium at Pohakuloa Training)
Area & Schofield Barracks, Hawai'i))

AFFIDAVIT OF JOHN HAYES

I, John Hayes, do hereby state as follows:

1. I am employed as a Senior Project Manager in the Materials Decommissioning Branch in the Nuclear Regulatory Commission's ("NRC") Office of Federal and State Materials and Environmental Management Programs. I serve as the Project Manager responsible for the review of the U. S. Department of the Army's request for a possession-only license for depleted uranium at the Schofield Barracks and the Pohakuloa Training Area sites.

2. Archives Search Report (ASR) – I was previously told by a representative of the Army that such a document was to appear on the Army website, <http://www.imcom.pac.army.mil/du/Reports.htm>. As of October 1, 2009, this document is not on the Army's website and the NRC has not received such document. The report is not part of the license application.

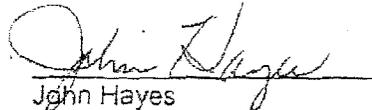
3. Pohakuloa Characterization Report - noted as the Technical Memorandum for Pohakuloa Training Area (PTA) Aerial Surveys , The Big Island (Hawaii), Hawaii, July 24, 2009. This report was provided to the NRC during the week of August 24, 2009. Problems arose with placing this document in ADAMS. The Army's CD did not include any of the Appendices'

information. The staff is addressing this issue. While this report is not part of the license application, it is likely that we will utilize the information in the report in our review of the application.

4. Pohakuloa Human Health Risk Assessment— It is my understanding from the Department of the Army that no health report would be generated which would address this topic because of lack of depleted uranium data from Pohakuloa. This information was also presented during our meeting with the Army the week of August 24, 2009. The report is not part of the license application.

5. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information and belief.

Executed in Rockville, MD
this 1st day of October, 2009


John Hayes

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)
)
U.S. ARMY INSTALLATION COMMAND) Docket No. 40-9083
)
(Depleted Uranium at Pohakuloa Training)
Area & Schofield Barracks, Hawai'i))

NOTICE OF APPEARANCE

Notice is hereby given that the undersigned attorney enters an appearance in the above-captioned matter. In accordance with 10 C.F.R. § 2.314(b), the following information is provided:

Name: Brett Michael Patrick Klukan
Address: U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop: O-15 D-21
Washington, D.C. 20555
Telephone Number: (301) 415-3629
E-mail Address: Brett.Klukan@nrc.gov
Facsimile Number: (301) 415-3725
Admissions: Commonwealth of Pennsylvania
Name of Party: NRC Staff

Executed in Accord with 10 CFR 2.304(d)

Brett Michael Patrick Klukan
Counsel for the NRC Staff
U.S. Nuclear Regulatory Commission
Mail Stop O-15 D21
Washington, DC 20555-0001
(301) 415-3629
Brett.Klukan@nrc.gov

Dated at Rockville, Maryland
This 1st day of October, 2009

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of)
)
U.S. ARMY INSTALLATION COMMAND) Docket No. 40-9083
)
(Depleted Uranium at Pohakuloa Training)
Area & Schofield Barracks, Hawai'i))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "NRC STAFF'S RESPONSE TO SIERRA CLUB'S MOTION FOR EXTENSION OF TIME TO FILE COMMENTS, A REQUEST FOR HEARING AND PETITION FOR INTERVENTION" in the above captioned proceeding have been served via the Electronic Information Exchange ("EIE") this 1st day of October 2009, which to the best of my knowledge resulted in transmittal of the foregoing to those on the EIE Service List for the above captioned proceeding.

Executed in Accord with 10 CFR 2.304(d)
Brett Michael Patrick Klukan
Counsel for the NRC Staff
U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop: O15-D21
Washington, D.C. 20555-0001
(301) 415-3629
Brett.Klukan@nrc.gov

Hilo Public Library
300 Waiānue Ave.
Hilo, HI 96720-2447

'Mother' of women suicide
bombers captured **PAGE 3A**

Players
Pro Bowl

22



PAGE 1B

West Hawaii Today

WEDNESDAY, FEBRUARY 4, 2009

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Depleted uranium at Pohakuloa

Army: No threat, more rounds may have been fired

BY JIM QUIRK
WEST HAWAII TODAY
jquirk@westhawaii.com

HILO — More ammunition containing depleted uranium may have been fired at Pohakuloa Training Area than originally thought, but military officials insist there is still no "imminent or immediate" radioactive threat to human health.

U.S. Army Col. Howard Killian met with the Hawaii County Council in a Tuesday morning committee meeting — and later with the media at the Hilo Hawaiian Hotel — to provide an update on the military's efforts to determine depleted uranium levels at PTA.

Although records show 714 spotting rounds used in Davy Crockett weapons systems were shipped to the state in the 1960s, Killian said

the types of exercises conducted at PTA would require the firing of at least 2,050 such spotting rounds.

However, the Army has been unable to find records that verify 2,050 spotting rounds containing depleted uranium were brought to the Big Island, he said.

The Army does know that of the more than 70,000 specific spotting rounds manufactured, more than 34,000 were shipped directly to

military installations and 44,000 were demilitarized in the 1970s. Of that total more than 40,000 were shipped to depots, Killian said.

The Army has been unable to determine where spotting rounds sent to depots eventually ended up, he said.

Some residents have expressed concerns since 2006, when the Army at PTA discovered radioactive materials that were remnants

of the spotting rounds fired in the 1960s.

The concerns prompted the council last year to pass a resolution to halt live firing exercises until it is known whether depleted uranium is present at the site.

The Army, however, has not stopped exercises.

Residents who testified Tuesday

► SEE PTA PAGE 4A

► SALARIES: Lingle has proposed bills that would halt future raises

CONTINUED FROM PAGE 1A

— on Jan. 1. It was their first raise since 2005, and they hadn't seen an increase in 12 years before that, noted Speaker of the House Calvin Say.

Gov. Linda Lingle received two 5 percent raises worth \$10,480 to boost her pay to \$123,480 on July 1. Judges' pay has jumped more than \$30,000 over the last three years, and they now make at least \$148,548.

All of the raises kicked in as a result of actions by a Salary Commission with no legislative fingerprints and little oversight.

"We all know we have to do what we have to do. It's anticipated right now that the pay raises will probably play a role in the balancing of the budget," said Senate President Colleen Hanabusa, D-Nanakuli-Makua. "It's still up in the air, but I think that there's probably an acceptance that this is where we're going to go."

Both Say and Hanabusa agree that any legislation reducing planned pay raises would only influence future pay raises. They say any law limiting pay would affect all

lawmakers pass a law preventing them.

Voters approved the Salary Commission idea during the 2006 elections. It was meant to prevent legislators from having to vote on their own salaries. But they'll have to cast exactly that kind of vote if salary freeze legislation moves forward at the Capitol.

The Salary Commission had seven members: two appointed by Say, two by Hanabusa, two by Lingle and one by Chief Justice Ronald Moon.

Lingle also has proposed bills to the Legislature that would stop future pay raises from taking effect, but she doesn't want any political drama.

"The bottom line here is there's going to be shared sacrifice," Lingle said in a news conference last month. "My proposal is not to put them in a corner, or to box them in. They'll deal with it in the best way they can, and I'll leave that to them to decide. I just want to be clear that we need to work together throughout this session, and that means not nitpicking and not squabbling."

Unless lawmakers suspend the salary increases addi-

► PTA: Air analysis will be provided monthly

CONTINUED FROM PAGE 1A

expressed concerns that the Army has not been completely truthful about depleted uranium levels at PTA. One resident held up a sign outside the Ben Franklin building where the meeting took place that read, "radiation cover-up."

Killian, however, said there is no cover-up and the military plans to release all of its test results to the public sometime this spring.

The Army conducted a survey of the area where depleted uranium may exist late last year, but that report is still being finalized, he said.

Also, the Army, working in conjunction with the state Department of Health, intends to spend \$150,000

to set up several air sampling systems at PTA and in Waikoloa that will monitor the air over the course of a year to determine the presence of depleted uranium, Killian said.

Reports on the air analysis will be provided monthly, he said.

Still, some residents do not approve of how the military is handling the situation.

Jim Albertini, of Kurtistown, said that because the military has failed to honor the resolution approved by the council last year, the council should vote on a bill that urges the state to cancel the Army's lease to use the PTA site.

Sierra Club member Cory Hardin said she doesn't understand how the Army can conclude there is no radiation danger when the

studies are not completed.

Howard Sugai, chief public affairs officer for the Army's Pacific region, said later the reason for that is "because of what we know about depleted uranium" and that the Army would have already detected it.

South Kona Councilwoman Brenda Ford and Puna Councilwoman Emily Naeole expressed concerns that the Army has not invited Maui resident Dr. Lorrin Pang, a former Army doctor and World Health Organization consultant, to serve on a community advisory council formed to study the situation.

Pang is perhaps the most noted of the scientists to express concerns about depleted uranium at PTA, and some residents and county officials apparently

would feel more comfortable if he were to serve on the Army's advisory council.

Army officials said Tuesday Pang was excluded from the advisory council because he is not a Big Island resident, but that his inclusion will be considered.

Those interested in more information can find it on the Internet at www.imcom.pac.army.mil/du/.

In other business Tuesday, council committees voted unanimously in favor of confirming two more appointments to Mayor Billy Kenoi's cabinet, including Lono Tyson as Environmental Management director and Bob Fitzgerald as Parks and Recreation Department director.

► IRAN: Satellite designed to circle earth 15 times in 24 hours

CONTINUED FROM PAGE 1A

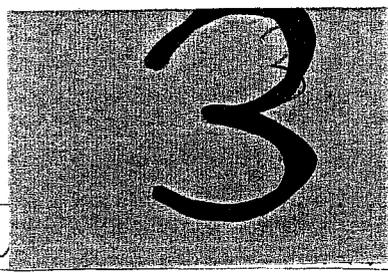
carrying the satellite at an unidentified location in Iran.

Center for Strategic and International Studies in Washington.

White House spokesman Robert Gibbs condemned the launch saying: "This

from the U.S., Russia, Britain, France, Germany and China were set to meet Wednesday near Frankfurt to talk about Iran's nuclear program. The group has

and had made contact with ground stations, though not all of its functions were active yet. He said Iran would now seek to increase the ability of its satellite-



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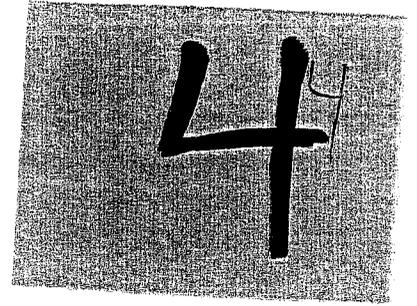
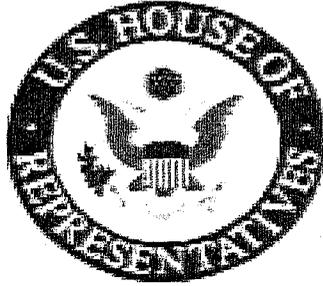
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In response to your
recent inquiry.

Office of Congresswoman Mazie K. Hirono

*time took to mail it twice - work on Hirono ~~at~~ the about
she was at the July 20, 2009*

S-20-09

Copy

On February 20, 2009, the Sierra Club, Moku Loa Group requested Congressional assistance to address concerns with the Nuclear Regulatory Commission's (NRC) plans to issue the Army a license for depleted uranium (DU) for the Pohakuloa Training Area. The Sierra Club expressed the below concerns and requested Congressional support of its recommendations. The Army's responses to each concern and recommendation are provided below.

Sierra Club's concerns:

1 - There may be 2,000 DU spotting rounds at Pohakuloa alone--many times the original estimate of 700 statewide. Both the Army and a Sierra Club consultant, using different data sets, came up with the same figure.

"U.S. Army Colonel Killian...said the types of exercises conducted at PTA (Pohakuloa Training Area) would require the firing of at least 2,050...spotting rounds." [Depleted Uranium at Pohakuloa, West Hawai'i Today, 2-4-09]

The 2,050 figure was based on old training manuals, which specify how many rounds soldiers had to shoot to be qualified on the weapon system. from my notes on Col. Killian's presentation to Hawai'i County Council 2-3-09, and conversations with him that day

"An environmental consultant [Peter Strauss, hired by Sierra Club] estimated there may be as many as 2,000 depleted uranium rounds at Pohakuloa Training Area. The consultant's analysis was based on an Army report estimating that between 120 and 400 firing pistons are scattered around impact ranges at PTA. Each piston would have fired up to five of the DU rounds, for a total of between 600 and 2,000 rounds fired, Strauss said. " [Sierra Club consultant disputes Army's DU tally, Hawai'i Tribune-Herald, 8-26-08]

Army Response. The Army agrees it is theoretically possible to have fired up to 2,520 rounds on training ranges in Hawaii. This includes both Schofield and Pohakuloa ranges. However, shipping records have accounted for all, but 20 of the rounds. Therefore, it is reasonable to assume that only a total of 714 rounds were fired in Hawaii. (Note: The below extract from the Archives Search Report includes a plausible explanation for the reason that fewer rounds may have been fired in Hawaii.)

*Response from U.S. Army
re: Corey Harder*

Total rounds verified shipped to Oahu from Lake City Ordnance Plant were 714 rounds on 27 April 1962. Notice this date coincides with the first weapons arriving at Oahu in the spring of 1962. As discussed in Section 8.1, this original shipping quantity is not close to the "worst case scenario" estimate of usage for six years with 14 weapons (2,520 rounds). This shipping quantity averages only 8.5 rounds fired per year per weapon. It is highly probable that additional stocks of the Cartridge, 20mm Spotting M101 were order from one of the Ordnance Depots (Letterkenny or Pueblo) during the six active years of the Davy Crockett Weapon System in Hawaii.³⁰

2 - DU may be dispersed from spotting rounds lying in the open. They may be hit by one-ton inert bombs dropping from three miles up, and by live-fire explosions. Some are fragmented. All are weathering.

Army Response. The process the Army used identified potential ranges where the M28 Davy Crockett could have been fired. These areas are outside both the bomb target and high explosives impact areas.

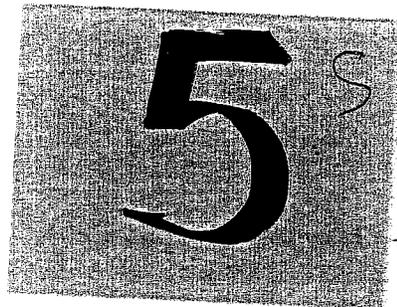
3 - No one knows exactly where all the spotting rounds are. Surveys for current studies covered fewer than 1000 acres of the 50,000-acre impact area. Decisions on where to survey were based on old and perhaps incomplete records. DU fallen into lava fissures is hidden from sight and from radiation detectors. So little data is available that the design of the risk assessment study had to be changed.

Army Response. The Army has conducted extensive research into Davy Crockett-related training and the use of the M101 Spotting Round in Hawaii. In addition, the Army has conducted both on-ground and an aerial survey of Pohakuloa impact area to identify and characterize areas where DU is present. The entire impact area was assessed, and the Army continues to look for ways to identify areas within the entire Pohakuloa Training Area at which the M101 may have been used. Army's current effort is to attempt to use satellite based imagery. The Army's characterization report will be published in the near future.

The terrain at Pohakuloa is rough with fissures. Given the low level radiation associated with DU from M101, this terrain feature is viewed as passively reducing the potential risk of both migration and exposure.

4 - Air sampling may be the wrong type, according to Dr. Lorrin Pang of Maui, a former Army doctor and advisor to the World Health Organization, and Mike Reimer, a Kona geologist.

Army Response. The Army considered the suggestions made by Dr. Reimer and Dr. Pang. In many cases, their suggestions were based on the fact they did not possess a full set of the reports being developed by the Army. These documents answer many of the questions they raised. In other cases, the Army has worked with the State to determine how best to address those areas not under the Army's jurisdiction.



PM STRAUSS & ASSOCIATES
Energy and Environmental Consulting

MEMORANDUM

TO: Cory Harden
FROM: Peter Strauss
DATE: August 1, 2008
SUBJ: **Independent Review of Pohakuloa Training Area (PTA): Depleted Uranium from the Davey Crockett Weapon System**

Introduction

In 2003, spotting rounds associated with the Davey Crockett Light Weapon were discovered during routine activities at Schofield Barracks. These spotting rounds contained depleted uranium (DU). Spotting Rounds were used in practice for targeting the weapon. DU was used because of its heavy weight and density, which was supposed to mimic the trajectory of the projectile. The practice projectile did not contain any DU.

The Davey Crockett Weapon system was a tactical nuclear weapon, designed for use in the field. Target training of the weapon took place in three ranges in Hawaii. The suspected ranges include Makua Military Reservation (MMR) on Oahu, Pohakuloa Training Area (PTA) on Hawaii, and Schofield Barracks Impact Area on Oahu. For MMR and PTA, an archive search was done. A Technical Memorandum summarizing the results of the survey was completed in April 2008. This report focuses on PTA.

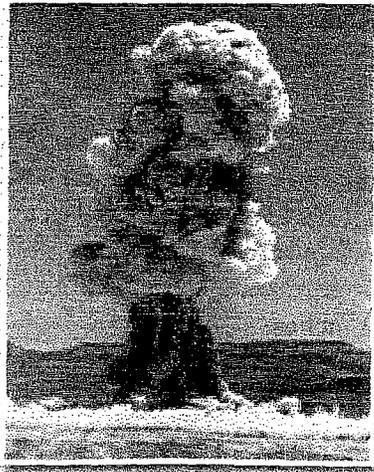
PTA is located on the island of Hawaii between Mauna Loa, Mauna Kea, and the Hualalai Volcanic Mountains. Its elevation ranges to approximately 6,800 feet to 9,000 feet. Groundwater occurrence on the island of Hawai'i is not well studied, although groundwater is used as the major drinking water source on the Island. Depth to groundwater is approximately 600 to 2,000 feet below ground surface (bgs). The 29-year average annual precipitation on the northern portion of the installation ranges from 10 to 16 inches.

The Davey Crockett Weapon System

This weapon system was based on recoilless rifle, a launcher similar to the shoulder-fired bazooka used during the Second World War. This weapon system, which was produced from 1960 until 1968, was used in training until 1968. It contained a warhead equivalent to 10 tons of TNT in destructive power. Only 80 warheads were produced during the first generation of the weapon. This was replaced by the W-48 warhead. The W-48 could be used in a more standard 155 mm howitzer. The W-48 increased destructive power of the earlier weapon by 7 fold. Together, almost 1,000 of these warheads were produced. Below is a picture of the earlier weapon, mounted on a truck.



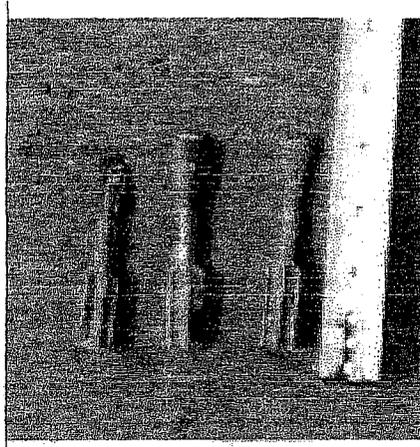
In 1962, this weapon system was tested in Nevada; a picture of that explosion is shown below.



<http://www.youtube.com/watch?v=khyZI3RK2IE>

The Davey Crockett used a piston to fire each practice round. It was like a booster: the piston is discharged from the weapon, and falls off the projectile, anywhere from 30 to 60 feet from the weapon. The practice rounds had a range of approximately 1,000 to 1,500 yards. The DU spotting rounds were used to help the weapon system operator to target the weapon accurately.

The spotting rounds were equipped with a small explosive charge to provide the operator of the weapon with information on the accuracy of weapon. If the operator did not hit the target with the spotting round, it would adjust the weapon and fire another spotting round. This would be repeated until the spotting round hit the target; after which the practice round was fired. Below is a photograph of the DU spotting rounds recovered from the Scofield Barracks.



U.S. Army Analysis

Analysis of the extent of DU on PTA was done by Cabrera for the Army. It first did an archival search. Because the weapon system was classified, this may have been more difficult than anticipated. Afterwards, a field scoping survey investigations conducted at PTA areas in August of 2007. The scoping survey was performed to assess the presence of DU fragments that might have originated from past training activities involving Davy Crockett. The survey's objectives were to identify whether the Davy Crockett was used at PTA, and if so, where and to what extent. It used historical data, aerial reconnaissance, radiation detection, and soil samples. If it was found that the Davy Crockett was used, readily visible DU was retrieved, where possible. Soil samples, were collected, if possible. Both of these latter tasks were made difficult because of the unexploded ordinance on the PTA. The Army's analysis

The aerial survey revealed the presence of pistons used to fire practice rounds. "A rough estimate showed there to be approximately 30-100 pistons at each of four locations."

The field teams made "rough" calculations based upon the location of the pistons, the operational range of the Davy Crockett system, and the likely firing points. Once these calculations were made, field personnel traveled to the likely impact areas. Field teams made two trips into the impact area. The field team consisted of three personnel, one of which was the UXO escort. Where terrain, vegetation, and safety concerns allowed access, radiological surveys to measure levels of alpha, beta, and gamma radiation were done. It is important to note that DU is a composite of different isotopes of uranium, but on the whole it is chiefly an alpha emitter. Alpha particles will usually not penetrate an ordinary sheet of paper or the outer layer of skin. Alpha radiation is more damaging than the same dose of beta or gamma radiation. Further, alpha particles are very heavy and very energetic compared to other common types of radiation. Uranium is also a weak gamma emitter. As such, in areas that have naturally occurring uranium,

it is very difficult to discern the presence of DU through standard radiation detection techniques.

During the first trip into the impact area, no locations were identified. During the second trip into the impact area, the team located one spotting round. The round was recovered intact. No soil samples were collected because the round was resting on basaltic rock.

Soil samples were collected at areas where sediment had accumulated from past runoff/erosion events. Ten soil samples were collected around the perimeter of the suspect impact areas at the PTA during the scoping survey. All of the samples were analyzed for isotopic uranium by alpha spectrometry. All of the results are consistent with naturally occurring concentrations of uranium. None of the results indicate the presence of depleted uranium. Soil samples collected around the perimeter of the site did not indicate the presence of DU, although the consultant (Cabrera) noted that the data "do not represent a statistically significant data set".

The results of the PTA scoping survey confirmed four areas were used to test fire the weapon, as described above. There was only one siting and recovery of a spotting round. The report noted that sampling of the impact areas would yield a more significant result. Furthermore, "Cabrera recommends that the Army conduct a characterization survey of the impact range, with an emphasis on defining the impact areas, eliminating areas where possible from further evaluation, and developing data appropriate to support a human health risk assessment."

Analysis of Cabrera Report

Number of Practice Rounds

Based on aerial reconnaissance, there is definitive evidence that the Davey Crockett weapon was used at PTA. Anywhere from 120 to 400 pistons were identified by air at PTA (30 to 100 in four locations). Because of the sparse vegetation on PTA, the Army is confident that this is probably the extent of practice firing at PTA, although it cannot be ruled out that other locations were missed. If this estimate is correct, up to 400 firings of the weapon took place. However, the number of times the weapon was fired based on aerial reconnaissance can only be roughly estimated by this method. If vegetation or terrain blocked visual recognition, one may have not been able to identify a firing location, or the presence of discharged pistons. To be conservative, I would use the upper end of this range. Note that the Davey Crockett practice rounds were made of plastic with an explosive charge. They would not leave a signature on the firing range after more than 50 years. (As noted above, I have confirmed that the practice rounds did not contain DU.)

Number of Spotting Rounds

I have estimated that up to 120 to 2,000 spotting rounds were fired on the PTA. The Army has stated anywhere from one to five spotting rounds were used for each practice round. Again, I would use the upper end of this range, because of the roughness of the estimates. The spotting round was made of a DU/molybdenum alloy, containing 92% DU, weighing 6.7 ounces each. Thus, if the maximum number were fired, 770 pounds of DU would be present on PTA. (If only one spotting round was fired for each practice round, there would be 46 pounds on PTA.)

Further evidence of the amount of spotting rounds was revealed in the archival survey. It was confirmed that 714 spotting rounds were shipped, containing 275 pounds of DU. In my opinion,

this is not definitive – merely it is indicative that at least one shipping document was located. Record searches of shipping papers dating back 50 years cannot be relied on as a definitive source – but may be used as a first step in understanding if there is a problem. It should be noted that the ITRC UXO Team stated that “It is critically important to recognize the potential limitations of many initial historical reviews. The historical research may not be exhaustive and may not have identified all potential munitions sites or hazards”. Furthermore it states that “Some initial historical reviews may be cursory reviews that are not intended to be an all-inclusive, exhaustive review of available historical records. Such reviews are usually intended to provide enough information to identify areas that require an immediate response or to prioritize the site for the next step in the munitions response.”

It should be noted that I personally have not performed an archival search, and have not reviewed the Archival Search by the US Army Corps of Engineers (2007), except for the summation in the Technical Memorandum. There is no information about the use of the Davey Crockett in the summation with regards to PTA, only that there were 12 firing ranges on PTA. However, the Army’s Radiation Health Specialist feels confident that only 714 spotting rounds were shipped.

Location of the DU

The Army attempted to get a better picture of the extent and location of DU on PTA by using radiation detectors in the field. Because DU is primarily an alpha emitter – it does not travel far and can be easily shielded, detection is very difficult. Ground surveys using radiation detectors suffer if one is not immediately above an item, so long as it is not shielded. As noted in the Army’s analysis, upon identifying the firing locations, estimates of four impact areas were made. Personnel traveled to the likely impact areas – however in the scoping survey, “the rough terrain limited accessibility to the suspected impact areas”. During one trip, no spotting rounds were identified; during a second trip one spotting round was identified. This highlights the limitations of scoping survey, but says little about the presence or extent of DU on the range.

Soil samples and laboratory analysis are the most reliable technique for identifying the presence and migration of DU. However, soil samples depend on locating the sites where the rounds have fallen. The samples that were taken were taken from the perimeter of the impact area, and are not reliable indicator of what is on the site. No other biological, air or groundwater analysis was done to more accurately identify the location of the DU.

All that being said, there is little reliable information about the location of DU on the four impact areas.

Health Threat of DU

The health effects of DU are controversial. The science surrounding DU’s effects on the body is rapidly expanding due in large part to the concerns that have arisen from its use in weapon systems deployed in the Gulf War and the 1999 NATO action in the former Yugoslavia and the health effects that are known as Gulf War Syndrome. DU is primarily dangerous to people when it gets inside the body: through ingestion or inhalation. Inside the body, DU creates risks both as a toxic heavy metal and as a radioactive material. Exposure to DU in water is regulated largely because uranium is known to be nephrotoxic (toxic to the kidneys).

But health effects can only present themselves if there are exposure pathways. Below I have

briefly described the issues involved with the two major potential pathways at PTA. One is through inhalation, the other through ingestion of drinking water.

Inhalation

Inhalation is of concern both in the short term and the long term. In the short term, it is probably more critical to workers in the field than residents of the island. It is unlikely, in my opinion, that small particles of DU would be inhaled unless the person was in the immediate vicinity. Wind-carried particles would not likely carry very far because of the weight of the DU. Because the spotting rounds were not vaporized, but broke into fragments, off-site inhalation would be unlikely. Homeowners nearby took air samples and had them analyzed, and there did not appear to be the presence of uranium above background. Although the samples were collected by the Homeowners Association and the chain of custody and quality control probably did not follow general procedures, I would have expected the same result.

However, should changes to the land-use take place, recreational or other users could be exposed to DU through this pathway.

Ingestion

Infiltration and percolation of surface water could potentially dissolve and transport chemicals deposited in surface soils to the subsurface, including DU. However, it is posited by the Army that most of the mass of chemical residues are expected to dissolve relatively slowly in water and would remain in shallow soils. A Professor at the University of Hawaii has stated that "the high binding affinity that U (Uranium) has for Fe (iron)-rich particulates found in Hawaii soils should help immobilize the U (i.e., DU particles) near the point of impact." I agree that geochemistry of the site makes it unlikely that DU is leaching from the surface to the groundwater. However, because of the sparseness of information about groundwater, and the fact that it supplies the majority of drinking water for the Island, long-term monitoring of groundwater, as recommended below, is important.

Recommendations

I have several recommendations for further action.

1. Ensure follow through on Cabrera's recommendations

The Army is just beginning to follow up on the Cabrera recommendations (i.e., "the Army conduct a characterization survey of the impact range, with an emphasis on defining the impact areas, eliminating areas where possible from further evaluation, and developing data appropriate to support a human health risk assessment"). Greg Komb indicated that the Army is flying over the impact areas with radiation detection devices, using low-flying helicopters to detect radiation anomalies. In my opinion, it's unlikely that a helicopter would be able to distinguish readings from natural background. However, Greg Komb has stated that in flat terrain over the Scofield Barracks, he was able to discern the presence of DU. Regardless, aerial radiation detection would be gross, and in my opinion, I would not rely on it for evidence. Instead statistically significant soil samples analyzed by mass spectrometry and field radiation detection should be carried out, except where there are concerns about safety due to the

unexploded ordinance in the impact areas.

2. Establish Long-Term Monitoring

Long-term monitoring of soil and groundwater is essential to ensure that DU is not migrating through the environment. In particular, potable supplies of groundwater should be monitored. After any DU is found and cleared, then perimeter sampling of soil should be sufficient. I would recommend that the sampling be done annually, and after five years with no indication of DU, it may be adjusted to once every two years. Potable water supplies should be monitored annually. In addition, and as the Army intends, if there is any construction activity on PTA, soil samples and radiation detection should take place. If any DU is found, then a wider area should be surveyed.

3. Defining a Hazard

During my conversation with Greg Komb he stated that unless there were a hazard it would be unlikely that the Army would take active steps to remediate the area. I asked him what this meant, using the example that if he discovered 2,000 spotting rounds, would he consider this a hazard? The question was left unanswered. The Army needs to inform the public about how they would define a hazard that would lead to further action. From my review of munitions response documents, hazard assessment is based on a site-by-site analysis, and does not have strong regulatory guidance. Keep in mind, however, that probably the greatest hazard on PTA is from UXO.

Sources of Information

Phone with Howard Sugai (Indoor and Radiological Health Branch), Department of the Army, imcom-pacific-du@hawaii.army.mil, July 23, 2008

Phone with Greg Komb, Radiation Health and Safety Specialist, U.S. Army, July 28, 2008

Final Environmental Impact Statement (EIS) Army Transformation of the 2nd Brigade, 25th Infantry Division (Light), to a Stryker Brigade Combat Team (SBCT) May 2004.

Correspondence and Public Information Releases by the Waiki'i Homeowners Association

Literature Search of the Davey Crockett Weapon

Final Technical Memorandum: Depleted Uranium Scoping Investigations, Makua Military Reservation, Pohakuloa Training Area, Schofield Barracks Impact Area, Islands of Oahu and Hawaii, Prepared for Department of the Army, Cabrera Services, April 2008

Presentation Depleted Uranium Update Installation Management Command – Pacific COL Howard Killian, Deputy Region Director January 2008

Presentation of Kenneth H. Rubin, Ph.D., Professor and Chair of the Volcanology, Geochemistry and Petrology Division, Department of Geology and Geophysics, School of Ocean and Earth Science and Technology, University of Hawaii

Science for the Vulnerable Setting Radiation and Multiple Exposure Environmental Health Standards to Protect Those Most at Risk, Arjun Makhijani, Ph.D., Brice Smith, Ph.D., Michael C. Thorne, Ph.D., Chapter 8, October 19, 2006

Interstate Technology Regulatory Council (ITRC), Munitions Response Historical Records
Review, November 2003

Sierra Club consultant disputes Army's DU tally

By **BRET YAGER**
Tribune-Herald staff writer

An environmental consultant estimates there may be as many as 2,000 depleted uranium rounds

at Pohakuloa Training Area, but the Army is questioning the math used to arrive at that number.

Peter Strauss, president of PM Strauss & Associates, was hired

by Hawaii Island Chapter of Sierra Club to review Army findings on depleted uranium at PTA. Strauss has experience with Superfund sites, the decommissioning of

nuclear reactors and environmental assessments of military bases, according to his resume.

The consultant's analysis was based on an Army report estimat-

ing that between 120 and 400 firing pistons are scattered around impact ranges at PTA.

The pistons helped lob the

See **URANIUM** Page A8

URANIUM From front page

training rounds from the 1960s-era Davy Crockett recoilless rifle during military exercises. The weapon was designed to launch a small nuclear bomb in a real war situation.

Each piston would have fired up to five of the DU rounds, for a total of between 600 and 2,000 rounds fired, Strauss said, noting that two Army officials had told him the pistons fired multiple spotting rounds per piston.

But the Army on Monday questioned the number.

"Every time they fired the weapon, they would send one piston down-range," said Howard Sugai, public affairs officer with Army Installation Management Command for the Pacific Region. "The piston served sort of like a booster rocket, and it dropped off about 600 meters beyond the firing point. It's a one-

time deal because the piston is deeply embedded in the impact area, which is full of unexploded ordnance.

"(Strauss's report) didn't make sense to me, anyway," Sugai said. "I did think (the estimate) was rather high."

Army estimates of 120 to 400 pistons would equate to the same number of rounds containing DU.

Army officials say they believe 714 of the spotting rounds were shipped to Hawaii. But they don't know how much DU is contained at PTA and may not know even when an ongoing survey of the area is complete.

"I hope we will," Sugai said. "The challenge at PTA is that the DU may be buried deeply in those (fractured) lava fields."

The military has said it is committed to completing the survey but noted that a

thorough cleanup of fragments would be problematic because the terrain is made up of fractured lava rock. The area is also littered with small unexploded bombs.

While he understands the difficulty of cleaning up an area covered with unexploded ordnance, the Army should do its best, Strauss said.

"I suspect they should be monitoring it and retrieving as much as they can," Strauss said.

The Hawaii County Council passed a resolution in July urging the military to cease live-fire and bomb training at PTA until the DU has been cleaned up.

Strauss said the Army's estimate of 714 rounds is based on shipping documents half a century old. He cautioned that the archives search used to locate the documents may not have

revealed all the sources of DU, particularly since the weapon was classified and shrouded in secrecy.

But Sugai said the number is all the Army has to go on at the moment.

"For right now, we have to assume 714 is all we got," Sugai said.

Strauss said the toxic heavy metal can affect health if inhaled or swallowed, but inhalation of particles isn't likely "unless the person was standing in the immediate vicinity," nor is it likely the material is getting into groundwater. But that could change if the land passes into other uses, he said.

Strauss recommended long-term air, soil and water testing at PTA.

E-mail: Bret.Yager@hawaiitribune-herald.com

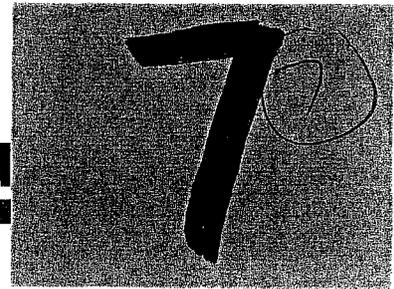
Setting the record straight

● An Aug. 26 article on depleted uranium at Pohakuloa Training Area incorrectly reported that pistons found at Pohakuloa Training Area were used to fire spotting rounds containing radioactive depleted uranium. The DU spotting rounds were fired separately from the pistons. The pistons were used to launch a fake nuclear warhead. The 85-pound fake warhead, or "dummy round," contained high explosives and its exterior was made of aluminum and plastic. The Army issued five DU spotting rounds with each fake warhead, and the Army assumes that all five DU spotting rounds were fired during practices, according to Col. Howard Killian,





Accounting of M101 Spotting Rounds



- M101 spotting rounds manufactured and distributed: **75,318**
- M101 spotting rounds shipped directly to installations: **34,070**
- Number of rounds shipped to depots: **41,248** *no records available showing #?*
- M101 spotting rounds demilitarized at the LCAAP during the 1970's: a maximum of **44,000**
- Number of M101 spotting rounds unaccounted for: **20** *Does anyone know for sure where the depot sent 41,248 rounds? - know that 20 for all meaning.*

- Notes:
- 1) Cannot account for rounds once shipped to installations or to depots.
 - 2) Cannot account for rounds demilitarized (i.e., which rounds were demilled).
 - 3) "Unaccounted" means receipt point is unknown.

Army Archive Search Report Results: Original documents located for the government purchased quantities of Cartridge, 20mm Spotting M101 were DD Forms 550. These were Ordnance Corp Ammunition Lot Records. When the entire lot was shipped off and the lot became "zeroed out", the form was pulled and filed. The form was annotated with carriers, transportation control numbers, and destinations. An analysis of each destination with quantities is shown in a spreadsheet.

Destination	Quantity of Cartridge, 20mm Spotting M101
Aberdeen Proving Ground, MD	200
Fort Benning, GA	9,700
Fort Campbell, KY	681
Fort Hood, TX	4,038
Fort Knox, KY	3,956
Fort Lewis, WA	1,756
Fort Riley, KS	105
Frankford Arsenal, PA	50
Frankfurt, Germany	7,833
Inchon, South Korea	1,440
Lake City Ordnance Plant, MO	45
Letterkenny Ordnance Depot, PA	17,183
Oahu, Hawaii	714
Pirmasens, Germany	3,384
Pueblo Ordnance Depot, CO	24,065
Ryukus Island (Okinawa) Japan	103
San Jose, CA	45
Doc No. JO 3-20718-1, destination unknown	20
TOTAL	75,318

including: lung cancer, leukemia, lymphoma (Hodgkin and non-Hodgkin), bone cancer, renal cancer, bladder cancer, brain and other nervous system cancers, stomach cancer, prostatic cancer, testicular cancer, nonmalignant renal disease, neurologic effects, reproductive and developmental effects, cardiovascular effects, genotoxicity, hematologic effects, immunologic effects, and skeletal effects.

ASR Davey Crockett Hawaii

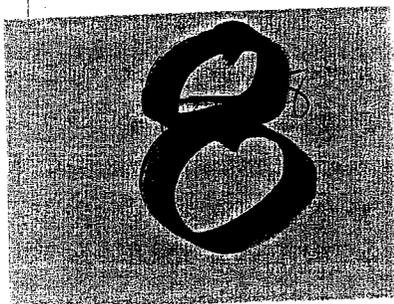
In November of 2006, the U.S. Army Joint Munitions Command (JMC) Safety/Radiation Waste Team tasked the U.S. Army Corps of Engineers (USACE), St. Louis District with this project. The project consisted of an archive search effort to collect data and information concerning the use of the Davy Crockett Light Weapon M28 on ranges at Schofield Barracks and associated training areas. This weapon system engaged the use of a 20mm cartridge for spotting of the training round. This Cartridge, 20mm Spotting M101 consisted of a body constructed of D-38 Uranium alloy (Uranium-238 Depleted Uranium).

Makua Flyover Tech Final

Cabrera Services Inc (CABRERA) was contracted by the U.S. Army Joint Munitions Command to perform confirmatory aerial radiation and visual surveys of potential Davy Crockett impact areas at the Makua Military Reservation (MMR), Hawaii (hereafter referred to as "MMR" or "the site"). And to the extent practical, conduct confirmatory ground based gamma walkover surveys (GWS) and soil sampling to correlate measurements taken during aerial surveys for the presence of DU. Due to potential presence of UXO/MEC, improved conventional munitions (ICM) and ground cover over the MMR range, only limited access for GWS and soil sampling was anticipated to be available.

PTA Flyover Tech Report Final

Cabrera Services Inc (CABRERA) was contracted by the U.S. Army Joint Munitions Command to perform confirmatory aerial radiation and visual surveys of potential Davy Crockett impact areas at the Makua Military Reservation (MMR), Hawaii (hereafter referred to as "MMR" or "the site"). And to the extent practical, conduct confirmatory



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The page you are looking for might have been removed, had its name changed, or is temporarily unavailable.

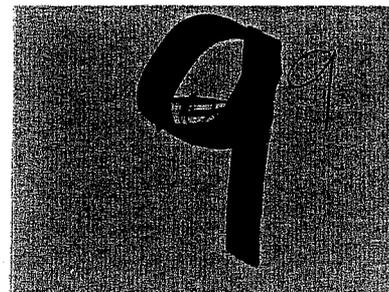
Please try the following:

- Make sure that the Web site address displayed in the address bar of your browser is spelled and formatted correctly.
- If you reached this page by clicking a link, contact the Web site administrator to alert them that the link is incorrectly formatted.
- Click the [Back](#) button to try another link.

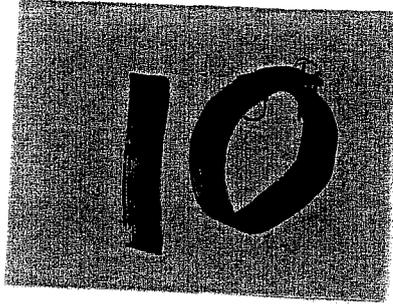
HTTP Error 404 - File or directory not found.
Internet Information Services (IIS)

Technical Information (for support personnel)

- Go to [Microsoft Product Support Services](#) and perform a title search for the words **HTTP** and **404**.
- Open **IIS Help**, which is accessible in IIS Manager (inetmgr), and search for topics titled **Web Site Setup**, **Common Administrative Tasks**, and **About Custom Error Messages**.



copy copy



December 13, 2008

Colonel Howard Killian
Army Installation Management Command-Pacific
132 Yamanaga St.
Fort Shafter, Hawai'i 96858

Aloha Colonel Killian,

Pursuant to the Freedom of Information Act ("FOIA"), 5 U.S.C. SS 552, Sierra Club, Moku Loa group requests a paper copy of the Archive Search Report on the Use of Cartridge, 20 mm Spotting M101 for Davy Crockett Light Weapon M28, Island of Oahu and Hawaii, USACE, St. Louis District, May 2007.

As provided by FOIA, we request a waiver of all search and copying fees. Sierra Club is a nonprofit organization working for protection of the environment. Sierra Club has no commercial interest in the documents requested, which are likely to contribute significantly to public understanding of the government response to environmental hazards from radioactivity at PTA.

We look forward to receiving your initial response within 20 business days of the receipt of this request, as provided by FOIA. Please call me if you have any questions. Thank you for your prompt attention to our request.

Mahalo,

Cory Harden mh@interpac.net 808-968-8965

Moku Loa Group, P.O. Box 1137, Hilo, Hawaii 96721

Cory (Martha) Harden

From: "Davis, Addison D SES CIV USA ASA IE" <Tad.Davis@us.army.mil>
To: <mh@interpac.net>; "Davis, Addison D SES CIV USA ASA IE" <Tad.Davis@us.army.mil>
Cc: "Tunick, Meredith Ms CTR USA ASA IE" <Meredith.Tunick@us.army.mil>
Sent: Saturday, September 26, 2009 7:56 PM
Subject: Re: FOIA

Cory,

Many thanks for your follow up note. Am enroute back to DC from TX. Will look into the status of a reply to your request and provide a response soonest.

Greatly appreciate your continued engagement on a number of important issues to us all.

Regards, Tad Davis

From: Cory (Martha) Harden <mh@interpac.net>
To: Davis, Addison D SES CIV USA ASA IE
Sent: Fri Sep 25 00:39:13 2009
Subject: FOIA

Dear Mr. Davis,

Thank you for meeting with me at Pohakuloa several months ago.

Can you please help obtain a response to this FOIA? I sent it nine months ago, then followed up several times, but still have not received the document.

thank you,

Cory Harden
 Sierra Club, Moku Loa group
 Box 1137
 Hilo, Hawai'i 96721
 808 968 8965
mh@interpac.net.

December 13, 2008

Colonel Howard Killian

Army Installation Management Command-Pacific

132 Yamanaga St.

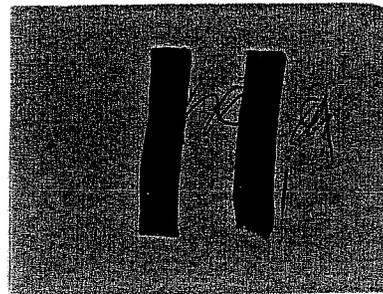
Fort Shafter, Hawai'i 96858

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9/27/2009

Kanada Local review council

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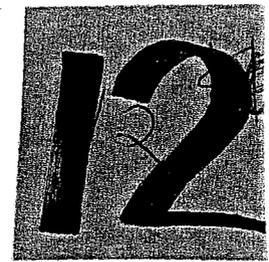
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1962-1968

925. PC in spotting v.

Any other PC packs in v. permeability type -
that's why they said no

1996 all PC have prohibited when NRC license

P. Court was dissolved - per hardware records
moved for other actions in well Court

what other dissolved systems? (archival)
debris list?

P.C. system 1961-1971

20 mm vertical & spoty metal (not 37 mm diameter)
had 50 5 sp. rods for workload
7 1/2" long 1/2" dia small rods when loads

where is PC in road? does it have?



plan - when records
monitor could specify dir PC print?
characteristic say - for well PC, where
dbs - suggest, for VIT COI NRC
heats etc (200) not published

NRC must permit a ~~small~~ comments on
method to possible re-identification
end Jan early Feb 2008

eyes to Part 2 sketches: open Registry
It may not be a change - Jan distinct
with 100 lbs
no logs with dir for 3rd Bygone lanes

6.302 231 1600
134 1600 cones
269
208
90



Project Current Status

13

*Party not
in room.
Revised not
inserted to
committee.*

- **General**

- Deputy Assistant Secretary of Army Davis visited with key leaders 26-31 OCT 08 and briefed current status of various efforts
- Comprehensive Army-wide archive search underway for Davy Crockett System
- Air Monitoring Study working

- **Pohakuloa Training Area (PTA)**

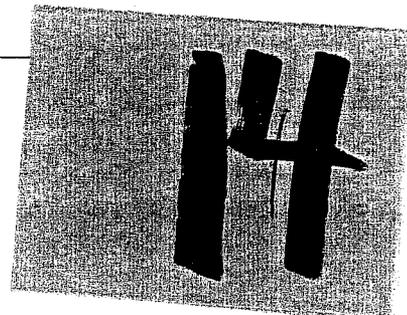
- Activated a Community Advisory Council
- Characterization Survey: Aerial survey to start 3 NOV – 15 DEC 08
- PTA air monitoring sample analysis:
 - Partially (half) complete 12 APR 08 results were published May 08
 - Half Awaiting analytical data
- Modified Risk Assessment anticipated by APR 09
- Developed B-2 impact assessment and temporary deconfliction measures

Some air sampling

- **ATSDR Health Consultation complete – 25 AUG 08 “ATSDR also concludes that no adverse human health effects would be expected as a result of potential exposure to depleted uranium at Pohakuloa Training Area if the depleted uranium rounds were left at their current locations.”**

Cory (Martha) Harden

From: "Hayes, John" <John.Hayes@nrc.gov>
To: "Cory (Martha) Harden" <mh@interpac.net>
Sent: Wednesday, September 09, 2009 8:00 AM
Subject: RE: re-sending/ Pohakuloa reports
 Ms. Harden,



Thank you for resending.

While I am back on the mainland I was still traveling last week so I did not have the opportunity to respond to your email. The characterization report on Pohakuloa was provided to the NRC during its visit to Hawaii. It is now being entered into the ADAMS system. It should be available in a week or so.

I contacted Greg Komp of the Army concerning the other two reports in your email. Greg indicated that the Pohakuloa report and the Archives Search Report you refer to are to be posted to the Army's web site this week. It may be found at <http://www.imcom.pac.army.mil/du/Reports.htm>. Greg also indicated that there is not going to be a HHRA report performed because of the limited amount of DU identified at Pohakuloa.

Jack

From: Cory (Martha) Harden [mailto:mh@interpac.net]
Sent: Tuesday, September 08, 2009 2:24 PM
To: Hayes, John
Subject: re-sending/ Pohakuloa reports

re-sending, in case original went missing

----- Original Message -----

From: Cory (Martha) Harden
To: GVT US NRC Hayes
Sent: Sunday, August 30, 2009 3:12 AM
Subject: Pohakuloa reports

Jack Hayes,

Good to meet your team in person.

Would you please let me know the status of the characterization and HHRA reports for Pohakuloa, and how I can obtain them? As you know, I'm also waiting on the Archives Search Report requested by Freedom of Information Act nine months ago, most recently promised by Greg Kompf at your August 27, 2009 Hilo meeting.

It would seem all reports should be publicly available before the clock starts ticking on the comment due date.

I didn't find any of the three reports on the CD passed out August 27, or on ADAMS. The reference person at ADAMS didn't find the characterization or HHRA reports.

Re. the characterization report--

About April 15, 2008, in a letter to Sierra Club, Army Colonel Killian said "The Army, in concert with state and

other federal agencies, is working on characterization at Pohakuloa Training Area. At the conclusion of this effort, a complete report will be published. We expect this report to be available in the Fall of 2008."

About May 20, 2009, the Army said "The Army's characterization report will be published in the near future". in a letter to U.S. Representative Mazie Hirono of Hawai'i. I assumed this report would be on Pohakuloa, because the statement is in a paragraph about Pohakuloa, and the final Schofield characterization report is dated earlier, April 2008.

Also about May 20, 2008, Colonel Killian made a presentation to Hawai'i County Council. A printout of that "Depleted Uranium Update" says "Pohakuloa Training Area... Characterization Survey: Fall 08...BHHRA" anticipated by the end of the calendar year".

An Army "Project Current Status" printout dated March 14, 2008 says "Planning the PTA Characterization Survey: 24 APR 08...survey start 16 JUN 08."

Re. the HHRA--

See above re "Depleted Uranium Update."

I believe that some time after May 20, 2008, Colonel Killian told County Council there would be no HHRA, because there was not enough data, but later he or an Army document said there would be a modified HHRA because of lack of data.

Thank you for all your work.

Cory Harden
Sierra Club, Moku Loa group
Box 1137
Hilo, Hawai'i 96721
808 968 8965
mh@interpac.net