

U.S. NUCLEAR POLICY AND DEPLETED URANIUM

**TESTIMONY AT THE JUNE 28, 2003, PUBLIC HEARING FOR
THE INTERNATIONAL WAR CRIMES TRIBUNAL ON AFGHANISTAN**

CHIBA, CHIBA PREFECTURE, JAPAN

BY

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We are gathered here today through the efforts of Professor Akira MAEDA and Haruhisa TAKASE. I would like to thank both of them, and the many citizens and supporters in Japan, who have made this important event possible. We, the people of the global community, must hold our governments and elected officials responsible for war crimes and crimes against humanity, for these two issues are impossible to separate. Because health connects all species, we are all effected by what happens, even in distant countries.

Today I will describe the intimate connection between U.S. nuclear policy and depleted uranium, and the devastating effects they have had on the health of all species and the devastation of the environment which supports all life. Tragically, Afghanistan is just one of the countries devastated for all future generations by the use of depleted uranium weaponry in U.S. military aggressive actions dictated by U.S. foreign policy.

**Heat not a furnace for your foe so hot
That it do singe yourself.**

William Shakespeare (1564–1616)

I am an independent scientist with a background in the geosciences. My hope and inspiration comes from my work with scientists and radiation specialists around the world to educate and inform the citizens of the world about the health and environmental effects from radiation exposure. In my professional career, I have worked at two nuclear weapons labs, the Lawrence Berkeley Lab where the transuranium elements were discovered to build the first atomic weapons, and the Lawrence Livermore Lab where nuclear weapons development continues.

After working on the cleanup and disposal of high level nuclear waste, I became a whistleblower in 1991 at the the Lawrence Livermore Lab. After observing an entrenched pattern of science fraud, theft, graft, corruption, lack of concerns for safety and security, discrimination against women and minorities, and severe retaliation practices, I drove out the lab gate one day, dropped off my badge and my beeper and never went back.

I realized after only two years at the lab, that the culture of nuclear weapons was a culture of insanity. What species on earth kills its young generation after generation? What species on earth sacrifices its young for the false notion of “security”?

At the end of the millenium which gave birth to nuclear weapons, I visited the Peace Museums in Hiroshima and Nagasaki during the 2000 World Conference Against Atomic and Hydrogen Bombs as the guest of Gensuikin. That visit to Japan changed my life when I finally understood the horrific effects of nuclear weapons. In 1991, in the first Gulf War, the United States broke a 60 year taboo and introduced depleted uranium to the battleground, a radiological weapon which is truly a weapon of indiscriminate killing and mass destruction.

Now that we know both, we must ask a question - which is worse, the horrific effects of flash annihilation from an atomic bomb or slow mutilation forever from depleted uranium weapons?

Today I have a clear conscience, the satisfaction of acting as a citizen scientist instead of a prostitute for the military or corporations, and have hope for the future. I know that the people of the world are the only ones who can stop the insanity of nuclear proliferation and radioactive contamination of the environment which supports all life. With good information the citizens of the world can make good decisions. My purpose now with other independent radiation specialists who have joined together as the World Committee on Radiation Risk is to provide good information about the health and environmental effects of radiation to the global community.

DECLASSIFIED MEMO TO GENERAL L.R. GROVES, OCTOBER 30, 1943: BLUEPRINT FOR DEPLETED URANIUM

A classified memo¹ dated October 30, 1943, was sent to General L.R. Groves from Dr. A.H. Compton, Dr. James B. Conant, and Dr. H.C. Urey, three of the most competent physicists working under General Groves on the Manhattan Project. This memo, written nearly two years before the atomic bombs were dropped on Hiroshima and Nagasaki, was a recommendation that radiological materials be developed for use as a military weapon on the battlefield. It is a blueprint for depleted uranium weaponry.

This memo which is now declassified, was given to me by Major Doug Rokke, a physicist and former head of the U.S. Army Depleted Uranium Weapons Project. He is a Gulf War I veteran and is now suffering from depleted uranium exposure with severe health effects referred to as Gulf War Syndrome. My work is inspired by the hibakusha around the world who, like Doug, have told me their stories.

It is clear from this memo that the U.S. Government and military have known before 1943 that radioactive materials, dispersed as very fine particles on the ground or from the air, would be an effective battlefield weapon. This plan was recommended so that the Germans would not develop it first from radioactive materials created by the waste of

nuclear weapons development. Depleted uranium is nuclear trash from the nuclear weapons project.

In the memo, the scientists recommended dispersing the radioactive materials in very fine particles, 0.1 microns in diameter, from the ground or the air. It would disperse like a radioactive gas, invisible and undetectable to the enemy. They described how increasing the amounts of radiation dispersed would accelerate and decrease the time until death and increase the numbers of dead.

It was known at that time that it would contaminate the air, water, food, and the soil. Entry into contaminated environments was impossible without certain exposure both to the enemy and to friendly forces. The memo detailed the fact that no protective methods were possible to develop, and that very fine particles would pass through all gas masks.

The memo also described that inhaled particles behave like a gas in the lungs, go directly into the blood and are dispersed throughout the tissues of the body. The gut would also be exposed by ingesting contaminated foods, and areas of the gut where the food sat for longer periods would have more radiation exposure and increased damage.

In conclusion, it is clear from this 1943 memo, that everything was known about the extreme hazards to health and environment of radiological materials dispersed in fine particles on the battlefield. The fact that depleted uranium burns at high temperatures and forms large numbers of extremely fine particles makes it even more deadly and effective than nearly any other material as a radiological weapon. The half-life of depleted uranium is so great, 4.5 billion years, that environments where it is used as a weapon will remain radioactive forever.

It is no accident that an international taboo prevented further use of nuclear and radioactive weapons on the battlefield after 1945. The use of depleted uranium in Gulf War I was a decision made by the Strategic Defense Command in order to blur the distinction between conventional and nuclear weapons. Because public opposition globally is so strong, the use of depleted uranium was used as a strategy to reintroduce the use of nuclear weapons.

LEGALITY TEST FOR WEAPONS UNDER INTERNATIONAL LAW

Weapons must pass four tests in order to determine that they are legal under international law. The tests are:

TEMPORAL TEST – Weapons must not continue to act after the battle is over.

ENVIRONMENTAL TEST – Weapons must not be unduly harmful to the environment.

TERRITORIAL TEST – Weapons must not act off of the battlefield.

HUMANENESS TEST – Weapons must not kill or wound inhumanely.

Depleted uranium weaponry fails all four tests. For that reason it is illegal under all treaties, all agreements and all war conventions:

The military use of DU violates current international humanitarian law, including the principle that there is no unlimited right to choose the means and methods of warfare (Art. 22 Hague Convention VI (HCIV); Art. 35 of the Additional Protocol to the Geneva (GP1); the ban on causing unnecessary suffering and superfluous injury (Art. 23 le HCIV; Art. 35 2 GP1), indiscriminate warfare (Art. 51 4c and 5b GP1) as well as the use of poison or poisoned weapons).

The deployment and use of DU violate the principles of international environmental and human rights protection. They contradict the right to life established by the Resolution 1996/16 of the UN Subcommittee on Human Rights.

*Resolution on the banning of the use of depleted uranium-DU
Antidiscriminationnetwork MSD e.V. Berlin Berlin 22.04.2000*

RESEARCH REPORT SUMMARIES 1974-1999

In order to develop new weapons systems for military applications, the weapons must first be researched and tested extensively². The development and testing is conducted at the National Laboratories and military testing grounds which the Army, Air Force, and other military branches have in various locations.

Research summaries posted on a military website describe the research and testing of depleted uranium weapons systems between 1974 and 1999. They describe in detail the concerns that researchers had about exposure hazards to personnel handling depleted uranium weapons. There are details about the extremely small particle size formed while burning and upon impact at a target. Animals living on the testing grounds were tested and radiation levels were measured in the fur and the gut of the animals. It is known that testing grounds remain radioactive from fine dust in the air and soil long after testing has ended.

One research report summarizes the reason why depleted uranium was selected by the U.S. Army over other materials less damaging to the environment – the cost. Because depleted uranium is the trash from the nuclear weapons and nuclear power industries, it is a radioactive hazard and liability to the Department of Energy (DOE). The DOE has a million tons of depleted uranium to dispose of. DOE made the decision to pass the radioactive trash on to the military-industrial complex for the manufacture of weapons. By passing the cost of disposal on to other countries, it is a savings for the U.S. Government. In fact, by selling depleted uranium weapons to more than 20 other countries, the DOE has made disposal a highly profitable business.

It is impossible for the U.S. Government³ to continue to deny as they have since Gulf War I, that depleted uranium weapons cause no harm or that there are no known health or environmental effects. The Groves memo from 1943 and Research Report summaries of investigations conducted for the military from 1974-1999 indicate that the omnicidal* impact of depleted uranium weapons has been known since 1943.

U.S. NUCLEAR WEAPONS POLICY

U.S. Government funding for nuclear weapons declined after Gulf War I to the lowest level in decades⁴. From the lowest point in 1995, funding has increased to a level even higher than during the Cold War. The United States has no enemies and yet budget increases continue.

Stockpile Stewardship of the existing nuclear weapons arsenal is part of the cost but new and evolving policies are emerging. Enhancing nuclear warhead capabilities is also part of the weapons program. Rebuilding nuclear weapons to improve accuracy, storage capability, altering the ability of warheads to withstand changes in environment, and modifications in where, when and how they detonate is also part of existing policy.

“Gold plating the nuclear weapons labs” describes the spending sprees which are a result of large amounts of money pouring into lab budgets. When excessive purchases of instruments and “toys for the boys” exceed what is really needed to conduct competent science the laboratories become “solutions looking for a problem”.

During a meeting where I gave testimony on May 15, in San Francisco, the University of California Board of Regents was informed by National Nuclear Security Administrator Linton Brooks that the National Labs would be developing nuclear bunker busters. One hour later he spoke at the Livermore Nuclear Weapons Lab and informed personnel that they would not only be developing small nuclear bunker busters, but they would be building large nuclear weapons as well!

For 60 years the University of California has been the manager of the nuclear weapons labs at Los Alamos and Livermore. Dr. Brooks informed the University of California at the May 15 meeting that the management contract will now go up for bid. The University of Texas is perceived to be the favored choice for the new management contract.

Is it a coincidence that the Bush family is also from Texas? In November 1991, Richard Berta, the Western Regional Inspector for the Department of Energy at the national nuclear weapons labs told me “the Pentagon exists for the oil companies...”

GULF WAR I

Depleted uranium was used in Gulf War I for the first time on the battlefield in large amounts. The use of over 340 tons of depleted uranium weaponry in Iraq in Gulf War I has had devastating results over the past decade and the devastating effects are

increasing. The battlefields were far from the cities of southern Iraq but soldiers and downwind populations could not escape exposure to the invisible war, depleted uranium in the wind. Cancer, birth defects and radiation related diseases in both Gulf War veterans and Iraqi civilians has increased to alarming levels.

Children born to Gulf War veterans after the war and children born to civilians living in areas downwind from the battlefields in Iraq expose the impact of this invisible war. In a Veterans Administration study⁵ of 251 Gulf War I veterans, they determined severe birth defects and diseases in 67% of the children⁶ born after the war. They were born without eyes, brains, organs, legs, arms, hands, feet, or had blood and other radiation related diseases. The Iraqi children also have birth defects and a high incidence of leukemia. In the decade after the Gulf War, each month the number of babies born with birth defects and mutations has increased.

Dr. Hari Sharma, an independent researcher, has measured the depleted uranium levels in 71 residents of Basra who died after the war was over. He found levels of 150 micrograms of depleted uranium per kilogram of tissue throughout their bodies. That would amount to a very high exposure rate, roughly estimated at 10 alpha particles per second throughout the body. Alpha particles are the most biologically damaging form of radiation. The radioactive decay products of depleted uranium are even more radioactive by millions and billions of times.

Living in a radioactive environment with chronic exposure to low levels of radiation has a cumulative effect and the entire population in contaminated areas will slowly be destroyed. Genetic defects will be passed to future generations who will also be exposed to new sources of radiation from contaminated air, water and food. The depleted uranium dust will cycle through the environment and travel throughout larger regions, carried on the atmospheric dusts which travel around the earth.

Following the Gulf War, Dr. Doug Rokke was in charge of the team cleaning up the depleted uranium for the U.S. Army. He provided me with documents detailing some of the U.S. Army directives and memorandums regarding depleted uranium. In a document dated March 1, 1991, "Los Alamos Memorandum"⁷ he said "I was directed to lie" to cover up the environmental effects of depleted uranium weaponry "so that the Army can continue to use it". He told me "what right do we have to throw thousands of tons of nuclear waste all over any country? [International Humanitarian Lawyer] Karen Parker considers this to be indiscriminate killing..."

The October 14, 1993, "Somalia Message"⁸ is the U.S. Army Medical Care Directive for unusual depleted uranium exposures such as "inhalation or ingestion of depleted uranium dust or smoke". This directive requires a radiobioassay within 24 hours, nasal swipes, and analysis of gas mask filters used by exposed personnel. Hundreds of thousands of U.S. soldiers, Iraqi soldiers, and citizens were exposed to "unusual uranium exposures". Dr. Rokke said that nothing was done for anyone.

Under international law, after the battle is over any medical treatment for wounded U.S. soldiers must be provided to wounded enemy soldiers as well. Even more important, any civilians who suffer from war exposures must also receive medical care. If the U.S. provides medical care for its own soldiers and does not treat enemy soldiers and/or civilians equally, that constitutes a war crime.

In an August 19, 1993, memorandum⁹ General Eric Shinseki, for the U.S. Army Office of the Deputy Chief of Staff for Operations and Plans, requires:

- adequate training for anyone who might come in contact with depleted uranium contaminated equipment
- complete medical testing of personnel exposed to depleted uranium contamination during the Persian Gulf War
- develop a plan for depleted uranium contaminated equipment recovery during future operations

The Army Environmental Policy Institute (AEPI) Executive Summary¹⁰ (1995) report to Congress addresses:

- the health and environmental consequences of depleted uranium
- remediation technologies that exist or might be developed to clean up depleted uranium contamination
- ways to reduce depleted uranium toxicity
- how to best protect the environment from the long-term consequences of depleted uranium use

Dr. Rokke informed me that the U.S. Army directives ordering medical care and environmental cleanup after Gulf War I were given to only a few military personnel and they were not complied with. This is a violation of both U.S. and International Laws and constitutes war crimes.

BOSNIA AND KOSOVO

In a recent United Nations Environmental Protection report, depleted uranium shells and bullets left in or on the ground have lost 25% of their mass by dissolving and are now contaminating the groundwater. Illnesses in civilians living near contaminated areas are rising.

During bombing in Kosovo and Bosnia, depleted uranium was monitored in Hungary and Greece, carried by the winds and eventually incorporating with atmospheric dusts. It is impossible to escape exposure even for populations hundreds and thousands of miles from battlegrounds.

A new study¹¹ in Germany of Gulf War and Balkans War veterans, found significant amounts of damage to chromosomes in these veterans. The damage was characteristic of exposure to ionizing radiation and high linear energy transfer particles (alpha particles).

AFGHANISTAN

Professor Marc Herold, from the University of New Hampshire, has conservatively estimated that the U.S. military used more than 1000 tons of depleted uranium weapons in the recent conflict in Afghanistan. This is nearly three times as much as Gulf War I.

Dr. Andre Gsponer has provided deeply troubling information in his research papers¹² which details how and why the U.S. Government has used depleted uranium and compares its performance to tungsten. Although the performance of the two is close, tungsten is actually a better choice for performance and environmental impact. He believes that the pattern of testing different amounts of depleted uranium in each country may be a way to test 4th generation nuclear weapons without actually using them if the radiation levels are similar to depleted uranium. This could relate to the decision by the Strategic Defense Command to introduce the use depleted uranium in Gulf War I and the pressure over the last decade for new nuclear weapons development.

The impact on the wildlife in Afghanistan has been devastating. Not only is the environment contaminated with depleted uranium, but the Afghans have been forced to hunt rare and endangered species in order to eat the meat and sell the skins for money. The devastating effects of depleted uranium will occur in all species in contaminated areas. The impact on the animals in the Iraq region was also devastating yet there was very little reporting on it¹³.

7.5 MINUTE VIDEO OF AN AC-130 GUNSHIP IN AFGHANISTAN

The bombing of Afghanistan by U.S. military forces demonstrated the deliberate use of illegal weapons such as bunker busters, cluster bombs and other depleted uranium weapons systems to target civilian populations, water supplies, and infrastructure. Afghanistan is a poverty stricken underdeveloped country which poses no threat to the United States or any other country.

This 7.5 minute video¹⁴ which I found on the internet, was taken from an AC-130 gunship on a combat mission in Afghanistan. The voice-over is the conversation between the plane crew and a special operations team spotting for them on the ground. It is a frightening and horrifying example of the satellite guided, computer laptop, precision targeting of poor and unarmed civilians during the U.S. military aggression in Afghanistan.

Congresswoman Cynthia McKinney (D-GA) described in Congress¹⁵ how the U.S. military air dropped food packages to starving Afghans. The food packages looked very similar in size and color to unexploded cluster bomb ordinance. How many children stepped on land mines or picked up bombs that exploded in their hands when they were simply trying to feed themselves in order to survive?

The excuses used by the United States to bomb Iraq, Bosnia and Kosovo, Afghanistan, and recently in Iraq (for the second time), do not disguise the fact that the countries

where depleted uranium weapons have been used are countries that contain oil resources the United States wants to control or are neighbors to pipelines the US wants to build.

GLOBAL IMPACT OF DEPLETED URANIUM WEAPONS

Dr. Chris Busby's comments in a recent article¹⁶ posted on a Toronto website sums up the global impact that radiation has had from nuclear weapons testing and nuclear power plants. Depleted uranium weapons use is **adding to the radiation burden** which is the cause of the global cancer epidemic now on the increase:

If you think Cancer is a problem now, wait until more depleted uranium is released into the world.

This document reports known links between exposure to low-level nuclear radiation and cancer. Concerning the impending US war against Iraq.

"If Dai Williams' analysis is correct the SHOCK and AWE missile and bomb inventory (which I can send anyone interested) is accurate. We are talking about 1900 tons of DU (or perhaps U) which is equivalent to 60TBq of alpha and beta particulate activity equivalent to the amount of alpha emitting radioactive material Sellafield put into the Irish Sea each year at the peak of its releases and about 50 times the present amount released annually to the Irish Sea. This DU will become widely dispersed and re: Israel I would not want to be living within 1000 miles of Baghdad. As a crime against humanity and a weapon of mass destruction this will be in a class of its own."

(C. Busby)

The European Committee on Radiation Risk (ECRR) concludes:

"The present cancer epidemic is a consequence of exposure to global atmospheric weapons fallout in the periods 1959-1963 and that more recent releases of radioisotopes to the environment from the operation of nuclear fuel cycle will result in significant increases in cancer and other types of ill health."

(ISBN# 1-897761-24-4) (C. Busby)

The ECRR is based upon studies of chronic, internal exposure to low-level nuclear isotopes in diverse populations: leukemia in children on the Irish Sea Coast (Sellafield); Chernobyl children; and civilians and military exposed to Depleted Uranium (DU) armaments resulting in systemic harm and genetic damage.

"Using both the ECRR's new model and that of the International Committee for Radiation Protection (ICRP), the committee calculates the total number of deaths resulting from the nuclear project since 1945. The ICRP calculation, based on figures for doses to populations up to 1989 given by the United Nations, results in 1,174,600 deaths from cancer. The ECRR model predicts 61,600,000 deaths from cancer, 1,600,000 infant

deaths and 1,900,000 fetal deaths. In addition the ECRR predicts a 10% loss of life quality integrated over all diseases and conditions in those who were exposed over the period of global weapons fallout."

CONCLUSION

The use of depleted uranium weapons is a crime against humanity, a crime against all species, and a war against the earth. It is imperative that we demand a permanent international moratorium on the sale and the use of depleted uranium weaponry.

Thank you for informing and educating the citizens of the world not only about the war crimes of President Bush in Afghanistan, but against all humanity. I am honored to have been invited by the citizens of Japan to give my testimony here today.

*omnicidal – the death of all life. In this sense, depleted uranium is the war against the earth – air, water, soil, and all species.

¹Letter to Congressman McDermott: Declassified 1943 memo to General L.R. Groves – a blueprint for depleted uranium

<http://www.mindfully.org/Nucs/2003/Leuren-Moret-Gen-Groves21feb03.htm>

²Research Report Summaries on Depleted Uranium from 1974-1999, conducted at National Laboratories and military labs.

http://www.gulflink.osd.mil/du_ii/du_ii_tab11.htm#TAB%20L_Research%20Report%20Summaries

³White House statement on “depleted uranium scare”,

<http://www.whitehouse.gov/ogc/apparatus/index.html>

⁴The Department of Energy Fiscal Year 2003 Budget Request for Nuclear Weapons Activities an analysis by Dr. Robert Civiak

⁵***Depleted Uranium: Metal of Dishonor*** International Action Center

<http://www.iacenter.org/depleted/mettoc.htm>

⁶LIFE Photoessay “The Tiny Victims of Desert Storm”

<http://www.life.com/Life/essay/gulfwar/gulf01.html>

⁷March 1, 1991, Los Alamos Memorandum

⁸October 14, 1993, “Somalia Message” is the U.S. Army Medical Care Directive

⁹August 19, 1993, memorandum from General Eric Shinseki, Office of the Deputy Chief of Staff for Operations and Plans

¹⁰ Army Environmental Policy Institute (AEPI) Executive Summary¹⁰ (1995)

¹¹“Chromosome Aberration Analysis in Peripheral Lymphocytes of Gulf War and Balkans War Veterans” H. Schroder et al., *Radiation Protection Dosimetry* V.103:3, pp.211-219 (2003).

¹²“Depleted Uranium Weapons: the Whys and Wherefores” A. Gsponer

http://arxiv.org/PS_cache/physics/pdf/0301/0301059.pdf

¹³“The Animal Victims of the Gulf War” by J. Loretz, *PSR Quarterly*; 1991:221-225.

<http://fn2.freenet.edmonton.ab.ca/~puppydog/gulfwar.htm>

¹⁴Combat video of Afghani civilians targeted from an AC-130 Spectre U.S. military plane

<http://www.hk94.com/weblog/index.php?p=62&c=1>

¹⁵“Rep. McKinney vilified for telling the truth” by B. Fertik, *San Francisco Bay View*, April 17, 2002, p.1.

¹⁶“If you think cancer is a problem now, wait until more depleted uranium is released into the world”

Toronto for Peace

<http://www.torontoforpeace.org/uranium-risks.html>