# Plutonium in DU Weapons, a Chronology

***If it has been through a reactor, it does change our idea on depleted uranium.***

**— Dr. Michael Repacholi, World Health Organization**

*Editor's note: The U.S. acknowledged as early as 2000 that its DU munitions are spiked with plutonium, neptunium and americium — highly radioactive "transuranic" (heavier than uranium) fission wastes from nuclear reactors. The health consequences are fearsome; transuranics are far more radioactive than the uranium-238 that makes up conventional DU munitions.*

*What follows is an unscientific chronology of some news coverage of the unfolding crisis of "dirty DU."*

**DOE Assistant Secretary David Michaels, January 20, 2000**

DU "contains a trace amount of plutonium," Michaels said. "Recycled uranium, which came straight from one of our production sites, e.g. Hanford [Reservation, in Richland, Washington], would routinely contain transuranics at a very low level. ..." Michaels wrote. "We have initiated a project to characterize the level of transuranics in the various depleted uranium inventories," he said.

***New York Times*, January 7, 2001**

Dr. Asaf Durakovic, a retired U.S. Army Col. who has studied veterans of the 1991 Persian Gulf war, found uranium -236 in 67 percent of the sick veterans he examined.

British biologist Dr. Roger Coghill said at a London conference that "one single particle of depleted uranium lodged in a lymph node can devastate the entire immune system."

***New York Times*, January 9, 2001**

The Pentagon's "hazard awareness" memo issued July 1, 1999 by the Joint Chiefs of Staff, warned military personnel entering Kosovo against touching spent ammunition, suggesting the use of protective masks and skin covering while in contaminated areas, and recommending follow-up health assessments.

***New York Times*, January 17, 2001**

Scientists and nuclear experts in Europe have said there are indications that some depleted uranium used in antitank rounds was "dirty," or contaminated.

"U-236 is created in a nuclear reactor," said French nuclear physicist, Monique Sené. "It comes from nuclear fuel and, most likely, from recycling nuclear waste. There is no other known source."

***New York Times*, January 18, 2001**

NATO Secretary General Lord Robertson said, "traces of highly radioactive elements such as plutonium … were not relevant to soldiers' health because of their minute quantities."

**Reuters, January 21, 2001**

The United States finally confirmed media reports and a Swiss laboratory finding that the 'low-risk' material held minute traces of highly toxic plutonium and highly radioactive uranium-236.

On January 18, Defense Department spokesman Kenneth Bacon said plutonium was detected a year ago and a nuclear facility was shut down for 90 days. "As you know, we discovered some stray elements ... in depleted uranium ..." Bacon said. "They consisted of plutonium, neptunium and americium. Now these are very, very small amounts ..."

Scientists say that inhaling one millionth of an ounce of plutonium can cause a fatal cancer.

***New York Times*, January 29, 2001**

"This cannot be conventional depleted uranium," said Monique Sené, a physicist who is prominent in France's large atomic research establishment, when asked about Dr. Durakovic's findings. "The ratios he found do not exist in nature. This contains nuclear waste."

Pierre Roussel, a physicist at France's National Center for Scientific Research in Paris, said, "The problem is that this isotope [U-236] can only be produced in a reactor, where it is accompanied by far more radioactive elements."

Experts in nuclear medicine in Britain, France and the U.S. said in interviews that they questioned the idea that there was no danger because experiments on animals had shown that uranium particles could get into the bloodstream, organs and bone, where they could deliver low-level radiation.

**Madison, Wisc. *Capital Times*, February 3, 2001**

But now the Pentagon says shells used in the 1999 Kosovo conflict were tainted with traces of plutonium, neptunium and americium — by-products of nuclear reactors that are much more radioactive than depleted uranium.

"If it has been through a reactor, it does change our idea on depleted uranium," said Dr. Michael Repacholi, a World Health Organization radiation expert. "It all depends on the amounts."

(Malcolm Grimston, a senior fellow specializing in chemical and nuclear studies at the Royal Institute of International Affairs in London, said, "You need to redo the calculations." – *USA Today*, June 25, 2001)

On February 1, 2001, NATO Secretary-General Lord Robertson reiterated NATO's position that Balkans peacekeepers have not been shown to suffer health damage from DU ammunition. U.S. officials have said the shells contained mere traces of plutonium, not enough to cause harm.

**Robert Alvarez, *The Nation*, April 9, 2001**

Over the past half-century, 700,000 metric tons of DU … was produced at three government-owned enrichment plants in Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio.

Some 150,000 tons of uranium, containing plutonium-239 and larger amounts of equally dangerous neptunium-237, were recycled from nuclear weapons production reactors and processed at the three gaseous-diffusion plants.

***USA Today*, June 25, 2001**

Much of it is fouled with traces of plutonium and other dangerous radioisotopes. Robert Alvarez, an Energy Department policy advisor from 1993 to 1999 says, "They really don't have reasonable estimates of how much [contamination] was in a lot of this recycled uranium." It could have "relatively high levels," he said.

***Seattle Times*, January 9, 2003**

The Pentagon revealed two years ago that some DU munitions were contaminated with more highly radioactive substances, such as plutonium.

***Journal of Environmental Radioactivity*, No. 64 (2003)**

Our data show the depleted nature of the uranium and confirm the presence of trace amounts of plutonium in the penetrator.

**Institute for Environmental & Energy Research, *Science for Democratic Action*, February 2003**

DU derived from recycled uranium (i.e., uranium that has been irradiated in a reactor) contains small amounts of some fissions products (notably technetium-99) and some transuranic radionuclides (like americium-241 and plutonium). These may cause a significant contribution to the total dose to workers during processing of the DU into metal. Most of these impurities would be removed during processing and therefore, in general, tend not [to] be present in significant amounts (relative to total uranium radioactivity) in finished munitions. (See: Rosalie Bertell, "Host Response to Depleted Uranium," Nov. 2001; www.iicph.org/docs/host_response_to_du.htm)

**U.S. Senator Russ Feingold, D-Wisc., Dec. 8, 2004**

"The [Dept. of Defense] acknowledged that stocks of depleted uranium munitions have been contaminated with plutonium and other radioactive materials which are extremely toxic and carcinogenic."

***New York Times*, Feb. 10, 2005**

The U.S. Energy Department has about 700,000 tons of DU, still mixed with fluorine and much of it in decaying metal canisters, in Ohio, Kentucky and Tennessee.

# Nukewatch Has a Word in the House of Commons

***Nukewatch staffer John LaForge spoke about the role of industry and public protest in the controversy over uranium weapons in a committee room of the House of Commons. Below are his remarks, abbreviated for space.***

It is an honor to speak with you in this magnificent place, especially since civil discussion and debate in the United States are being drowned out by the roar of mercenary armies sent abroad and stadiums full of screaming sports fans at home.

All of us come to our position here with a grim understanding of the grave consequences of what our governments are doing with radioactive waste: Its weaponization, and use as such, is a ghastly violation of treaties the so-called civilized world has promised to obey.

I've been asked to speak to the role of industry in this scandal and a bit about our work against it in the states. Simply put, industry's role is to obscure its criminal conspiracy to prepare wars in violation of international treaty law, all the while securing contracts for more production. Industry does this by touting the positive effects of uranium weapons, masking the actual contents of its shells, ignoring their effects, ridiculing peace activists, and contributing to the re-election of DU-friendly members of congress.

A spokesperson for Alliant Techsystems, (ATK) the U.S.'s biggest depleted uranium ammunition (DU) producer, has said that DU protesters at its Minnesota headquarters have "no impact on any decision this company makes." Yet the company has removed all mention of DU from its websites. And after critics broadcast the startling images widely, the company also removed photos of its haphazard clean-up operations at a contaminated DU production site.

ATK has produced over 15 million 30-mm shells for the U.S. Air Force and over one million 120-mm rounds for use in U.S. tanks and howitzers. Last February, the U.S. Army placed a $38 million order for its DU tank rounds. These days, descriptions of its DU munitions use the words "high density penetrator."

ATK is the largest ammunition-manufacturing entity in the world. It made headlines in 2005 by producing 1.2 *billion* bullets. ATK is now supplying more than 95 percent of all the Pentagon's small-caliber ammunition used for combat and training. ATK also makes machine guns, rocket motors, cluster bombs and (formerly) land mines. As a prosecutor told a jury in a protest case, "ATK doesn't make anything you'll be giving your kids at Christmas."

The industry must also hide the effects of its products. It is not helping produce 600,000 civilian deaths in Iraq, no. ATK says it is, "developing a new generation of weapon systems that will bring greater power, precision, and performance to America's fighting forces." The closest the company ever comes to mentioning the war is to say its shells have "outstanding lethality."

The industry works to protect its reputation from negative publicity with euphemism and distraction. It is not producing limitless radioactive pollution and attacking the gene pool of multiple generations, but says, "Our … munitions business is … providing capabilities critical to national security."

Of course DU is where the money is. The waste uranium-238 is given free to the contractor. But a single 30-mm DU round made for the A-10 Thunderbolt or Warthog warplane costs tax payers $21.50. The A-10 fires 3,800 rounds per minute, or $81,000 per-minute for ATK — as long as there's a war on. ...

*Photo courtesy of CADU*

**John LaForge, standing, in the British Parliament Feb. 7, along with, L-to-R: scientist Dr. Ian Fairlie, UK Member of the European Parliament Dr. Caroline Lucas, CADU staffer Rae Street, Member of Parliament Jeremy Corbyn, and Ria Verjauw of the Int'l Coalition to Ban Uranium Weapons in Belgium.**

**Citizen Action**

It is *so easy* to prove the outlaw status of these poison weapons, that after a perfect record of being convicted in every protest case I've been part of for 28 years, a jury found me and three friends "not guilty" of trespass at ATK. Our case was the fourth "not guilty" jury verdict there in four years. Over 100 campaigners have been similarly acquitted after showing the juries that weapons made with radioactive waste are illegal to produce.

We explained the Nuremberg Principles and how they forbid the planning and preparation of wars that would violate other treaties. The Tribunal declared, "International law, as such, binds every citizen, just as does ordinary municipal law." We showed that the building of weapons — the use of which is known in advance to be illegal — is itself a criminal act. We showed that citizens are rightfully allowed to interfere with such offences — known as inchoate crimes.

Juries — when allowed to hear all of the relevant evidence — have agreed that our demand to talk with company officials was an attempt at crime prevention**.** Not only was our arrest that day unlawful, but prosecutors have been educated: they can consider bringing charges against the real criminals.

***— For a detailed review of the Lobby Day presentations see: www.*CADU.org**