

Energy Department preparing to sell Canadian company 34 pounds of weapons-grade uranium.

This is excellent news when the consequences are the production of medical isotopes ... it is of course attacked by paid-activists like this small-time lecturer at UT supported by aging Paul Leventhal.

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A Canadian company's successful effort to get the United States to relax a nuclear proliferation law is starting to bear fruit as the Energy Department prepares to sell it 34 pounds of weapons-grade uranium.

The highly enriched uranium would be used by MDS Nordion of Ottawa to manufacture radioactive isotopes for use in X-ray machines and other medical equipment.

Paid activist, Alan Kuperman, an assistant professor at the University of Texas who has been advocating non-proliferation for nearly 20 years, wrote an article in the Bulletin of the Atomic Scientists criticizing the export of highly enriched uranium to a Canadian medical company.

The Nuclear Regulatory Commission is reviewing an application from the Energy Department for a license to export the uranium.

Most of the medical equipment would be shipped back to the United States, which does not have a company that manufactures the crucial diagnostic and therapeutic medical isotopes.

Non-proliferation activists, led by University of Texas assistant professor Alan Kuperman, charge that the sale of highly enriched uranium to Nordion represents a "giant step back" in national security.

Because of the *ease* (hardly the right word to describe a very complex and difficult chemical and physical process) with which it can be used to make an atomic bomb, highly enriched uranium is considered, by some proliferation and terrorism self-**acclaimed** experts, as the most dangerous material in the world.

Unlike plutonium, the other fissionable substance used in nuclear weapons, highly enriched uranium can be easily handled, is hard to detect and can be made into a Hiroshima-type bomb with power tools available in any hardware store, experts say.

"I personally think HEU represents our greatest vulnerability to nuclear terrorism," Kuperman said. of highly enriched uranium. "Only with HEU can you make a gun-type nuclear weapon, and that is something that is within the capabilities of terrorist groups."

A gun-type weapon, such as the bomb the United States detonated over Hiroshima, Japan, in World War II, creates an explosion by shooting one piece of highly enriched uranium into another.

Kuperman and other activists see the relaxed U.S. sales policy as undermining the country's longstanding practice of prodding other nations to stop using highly enriched uranium.

Had Congress not loosened the export controls last year, the pending sale to Nordion would not have been possible, Kuperman wrote in the current issue of the Bulletin of the Atomic Scientists.

The export control changes were tucked into the 1,754-page energy bill signed in August by President Bush.

The action followed a two-year Nordion-financed lobbying effort in which its American lobbyists donated thousands of dollars to the campaigns of key members of Congress, Kuperman says.

"It is a cautionary tale of how a single foreign company can weaken U.S. national security through misleading scare tactics and cold cash," he wrote.

Kuperman charged in an interview that Nordion got American radiologists to support its lobbying effort by fooling them into thinking the country's supply of radioisotopes for diagnostic and therapeutic use would be threatened without the change.

Nordion is the world's largest producer of radioactive medical isotopes created from a material called molybdenum-99. To make it, manufacturers bombard uranium-235 with neutrons, transforming a small part of it into molybdenum-99.

In reactors operated for this purpose by Nordion and three large isotope manufacturers in Europe, both the target metal and the source of the neutrons that bombard it are highly enriched uranium, in which the concentration of the uranium-235 isotope has been increased to 90 percent or more.

However, a technology developed at the Energy Department's Argonne National Laboratory near Chicago makes it possible to make the isotopes from low enriched uranium, which contains only about 20 % of uranium-235 and cannot be used to make a bomb.

The previous controls, spelled out in a law that Kuperman drafted in 1992 when he worked as an aide to then-Rep. Charles Schumer, D-N.Y., require foreign companies that receive highly enriched uranium from the United States to agree to modify their reactors to use low enriched uranium.

Kuperman said that the new law is "riddled" with loopholes.

The new export requirement applies to highly enriched uranium users in five countries: Canada, Belgium, Germany, the Netherlands and France. It continues to require isotope manufacturers to work toward converting to low enriched uranium, but gives them additional time. It also would waive the requirement if conversion would increase the cost of medical isotopes in the United States by 10 percent or more.

For several years, Nordion qualified for U.S. exports by making the required commitment to modify its reactors to use low enriched uranium. But it abandoned the commitment three years ago, Kuperman says.

A Nordion spokeswoman did not respond to a request for comment for this article.

Henry Royal, a professor of radiology at Washington University in St. Louis and past president of the Society of Nuclear Medicine, said that, "when it comes to keeping HEU

out of the hands of terrorists, we have much bigger problems that we should concentrate on."

"The last time I checked, Nordion was not a terrorist organization," said Royal, who is a consultant to the United Nations Scientific Committee on the Effects of Atomic Radiation.

Credible Kuperman -- hardly?

Kuperman's prominent role in opposing the export of highly enriched uranium for making medical isotopes has made him a target of criticism.

"He produces a lot of bad information, and I don't trust him," said Edward McGaffigan, who was appointed to the Nuclear Regulatory Commission by President Clinton.

McGaffigan said the previous controls were so "god-awfully drafted" that they were all but impossible to enforce.

The new law was supported by all members of the NRC and will make it easier to enforce export controls, McGaffigan said.

Royal said Kuperman was "ignoring some basic laws of physics" in his criticism of the export law changes.

Using low enriched uranium to produce medical isotopes would be less efficient and more expensive because it contains less of the needed U-235, he said.

Others, including an expert on uranium at Argonne, defended Kuperman as an accurate, if sometimes intemperate, analyst of proliferation issues.

Kuperman, 42, joined the staff of the nonproliferation advocacy group, Nuclear Control Institute, in 1987 after graduating from Harvard College.

As for the article in the Bulletin of the Atomic Scientists, "I know that it was thoroughly vetted before they published it," said Paul Leventhal, founder of the group.

The Bulletin of American Scientists is a notorious non-peer-reviewed magazine that publishes articles that cannot find publication in respectable journals.

Armand Travelli, who until his retirement in 2004 headed the low enriched uranium technology program at Argonne, said he had not read Kuperman's article. "But in general, I have thought the things he published in the past have been carefully researched," he said, adding, "He's not very diplomatic, sometimes."

After working for the **anti-progress** Nuclear Control Institute for two years, Kuperman went to work for Schumer and earned a master's degree from Johns Hopkins University School of Advanced International Relations in Washington. He later received a doctorate in international relations from the Massachusetts Institute of Technology.

He became a minor professor at UT's LBJ School of Public Affairs last year. **God-help UT!**