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## DISPELLING THE MYTHS ABOUT MILITARY USE OF DEPLETED URANIUM

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The international outcry over claims that the use of depleted uranium during the Kosovo intervention caused leukemia in 24 European members of the peacekeeping force is unfounded. Numerous studies of depleted uranium—the byproduct of the process of extracting fuel for nuclear reactors and weapons from uranium—have not found any link between its use by the military and any form of cancer or other health problems. The controversy that erupted after the soldiers were found to have leukemia is threatening to undermine the alliance structure in Europe. It is imperative that the facts about depleted uranium are not lost in the debate.

**FACT: The health risks posed by the military's use of depleted uranium are extremely low.**

Depleted uranium is a byproduct of the manufacturing of fuel for nuclear reactors and nuclear weapons. Simply, it is what remains after the highly radioactive uranium-235 has been removed from uranium-238 for use in these applications. The remaining (“depleted”) uranium is very dense and produces minimal radiation. Like lead, depleted uranium is a heavy metal that can be toxic if it enters the body, but nothing has linked its use as a weapon to disease. In fact, 15 Gulf War veterans with fragments of depleted uranium in their bodies are being closely studied by the Veterans Affairs (VA) Medical Center in Baltimore, Maryland. In the

decade since that war, not one has developed cancer.

Exposure to radiation from the military weapons that use depleted uranium, or from the dust it produces, has also been cited as a potential risk. In truth, however, the most dangerous gamma and x-rays are removed during the extraction of uranium-235, leaving the more benign alpha radiation that cannot penetrate the skin to cause internal injury.

**FACT: No evidence has been found to link the use of depleted uranium in weapons in Kosovo or other wars to cancer or leukemia.**

In February 2001, experts at the World Health Organization reported that they had found no firm evidence linking individual medical cases in Kosovo to exposure to depleted uranium. In a September 2000 study, the Institute of Medicine concluded that there was “limited/suggestive evidence of no association” between disease and exposure of no

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less than 20 rem (a unit of radiation), at least four times the highest exposure estimated for Gulf War veterans. And Dr. Frank von Hippel of Princeton University has concluded that even if a ton of depleted uranium dust were spread all over Kosovo, the resulting radiation level would be within one one-hundredth of 1 percent of the normal level. In fact, the health risk from radiation emitted from depleted uranium is so low that it is used in radiation shielding for hospitals. However, because the body of knowledge on the long-term effects of exposure to depleted uranium is very small, research in this area should continue.

**FACT: Depleted uranium is an effective military asset that would be difficult if not impossible to replace.**

The U.S. Army and U.S. Air Force rely heavily on depleted uranium munitions for anti-armor operations. Indeed, the ability of depleted uranium munitions to destroy main battle tanks in Iraq and the Balkans earned them the nickname “silver bullet.” Depleted uranium’s advantages over potential alternatives are that it is 65 percent more dense than lead, which enables it to pierce armor that would flatten other metals, and that it ignites on contact (pyrophoric effect), sharpening itself as it penetrates the target and ignites the fuel and ammunitions on board.

Tungsten, another heavy metal, is the nearest alternative. Used by the U.S. Navy, Germany, Italy, and Spain, this extremely dense substance lacks depleted uranium’s pyrophoric effect, making tungsten rounds much less effective. Moreover, tungsten is in short supply. The United States has not produced tungsten since 1994, importing it instead mostly from China and Russia, the two largest producers. It also is significantly more expensive than depleted uranium, which is almost free.

Technologically advanced seek-and-destroy munitions, when finally developed, could become an alternative to depleted uranium. The idea for these weapons is that a tank would fire a round that scans the ground and launches a molten metal slug at the most important target. However, this weapon would be costly and complicated, and would lack the penetrating power of depleted uranium. Fur-

thermore, it would rely on tantalum, a heavy metal that has not been studied extensively but is known to be highly toxic, especially when vaporized.

**FACT: America needs depleted uranium to counter the large armored forces that its potential adversaries now possess.**

America’s potential adversaries operate thousands of armored vehicles. North Korea, for example, maintains well over 6,000, while Iran and Iraq have a combined total of 7,500. China sustains a force of over 13,000 tanks and armored personnel carriers. These same nations are using depleted uranium to develop advanced armor and anti-armor munitions. Countries like Russia and China continue to proliferate technologies like depleted uranium without regard to America’s security interests.

**Conclusion.** The controversy that exploded after some European peacekeepers began to develop non-combat-related illnesses, including leukemia, after serving in the Balkans caused some allies such as Germany and Italy to call for a moratorium on the use of depleted uranium and friendly nations such as Switzerland to call for a total U.N. ban. Others have suggested the United States should be charged with a war crime for its use—an idea considered by the U.N.’s Chief Prosecutor for the International Criminal Tribunal for the Former Yugoslavia (ICTY).

The United States cannot afford to allow an effective, low-cost, and necessary weapons system to be held hostage by unfounded concerns while its adversaries build better weaponry. While it should make clear that it will discontinue the use of depleted uranium should science reveal provable health risks, the United States and allies who agree with it—including the United Kingdom and France—must not allow the dispute to undermine the critical alliance structure in Europe.

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