

**Reprocessing and Proliferation Dangers**  
**By Carah Ong<sup>1</sup>**  
**May 2005**

**Reprocessing is contrary to national and international efforts to prevent the proliferation of nuclear materials to other countries or terrorists that could use them to make nuclear weapons or “dirty bombs.”**

If the US pursues reprocessing, it will undermine international efforts to discourage other countries – including Iran and other states of proliferation concern – from building their own reprocessing and enrichment facilities. As a 1994 report by the National Academy of Sciences (NAS) states, “[P]olicymakers will have to take into account the fact that choosing to use weapons plutonium in reactors would be perceived by some as representing generalized U.S. approval of separated plutonium fuel cycles, thereby compromising the ability of the U.S. government to oppose such fuel cycles elsewhere.”<sup>2</sup>

Reprocessing is the only way of producing plutonium for use in nuclear weapons. Now nuclear weapons states, India and Pakistan both pursued plutonium programs that they justified as a legitimate part of their civil nuclear programs. North Korea also claimed for years that its reprocessing plant at Yongbyon was intended to separate plutonium for use in Mixed Oxide fuel for civilian nuclear power reactors. Today, experts believe North Korea has enough plutonium for some six to eight nuclear warheads.

At the end of 2003, the world’s stockpiles of separated civilian plutonium stood at 235 metric tons, enough to make some 30,000 nuclear weapons, each with the destructive power comparable to the Hiroshima and Nagasaki bombs. Despite assertions to the contrary, terrorists could use civil plutonium to make potent nuclear weapons with a destructive power equivalent to at least 1,000 tons of TNT. Respected voices within the UK have warned of the dangers from Britain’s growing stockpile of separated plutonium. Perhaps most notably, in 1998, Britain’s Royal Society warned that “the chance that the stocks of plutonium might, at some stage, be accessed for illicit weapons production is of extreme concern.”<sup>3</sup>

As a Rand Corporation report states, “It is critical that countries pay attention to the proliferation threat from the civilian side if they want to maximize the non-proliferation value of dismantling U.S. nuclear weapons and those of the FSRs (former Soviet republics). If countries ignore the civilian threat, they can compound the problem by making wrong choices in how to deal with military materials.”<sup>4</sup>

---

<sup>1</sup> Carah Ong is the Nuclear Age Peace Foundation’s Advocacy and Research Director. She can be reached at [cong@napf.org](mailto:cong@napf.org).

<sup>2</sup> Committee on International Security and Arms Control, National Academy of Sciences, *Management and Disposition of Excess Weapons Plutonium* [NAS study]. 1994, p. 149.

<sup>3</sup> *Management of Separated Plutonium* (London, The Royal Society, 1998), Summary.

<sup>4</sup> Brian Chow and Kenneth Solomon, *Limiting the Spread of Weapon-Usable Fissile Materials*, Rand Corporation Report, November 1993, p. xii.

## **Reprocessing is not proliferation resistant.**

The US is currently researching and developing a technology known as Uranium Extraction Plus or UREX Plus. In a testimony on March 17, 2005 before the Energy and Water Appropriations Subcommittee, Bill Magwood, the Director of the Office of Nuclear Energy, Science and Technology at the US Department of Energy, stated, “One test that it [UREX Plus] has not yet passed is the proliferation resistance test.” In the same testimony, Magwood also stated, “[W]e're not sure that it's possible to use this chemical technology to separate the plutonium in combination with a few other things, in a fashion that will make it both proliferation resistant and economically viable.”

## **Recommendation**

Taking into account the previous Bush administration's decision to phase out reprocessing, rather than taking a do-as-I-say-not-as-I-do approach to managing nuclear materials, the US should take the lead in demonstrating to the world that nuclear materials can be safely managed without separating weapons-usable materials as a critical step in curtailing the spread of nuclear weapons.

## **For more information, contact:**

Carah Ong, Nuclear Age Peace Foundation, (202) 378-3334