

Proliferation News: 26 August 2004
Carnegie Endowment for International Peace

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A Plutonium Primer

(Joe Cirincione and Jon Wolfsthal, Carnegie Analysis)

<http://www.ceip.org/files/nonprolif/templates/article.asp?NewsID=6712>

Thursday, August 26

In a nuclear reactor, uranium fuel (either natural uranium or slightly enriched, depending on the reactor design) is used to create a controlled chain reaction. This reaction releases neutrons that in turn are captured by fertile nuclear materials, such as Uranium-232 or -238. These materials, with the addition of a new neutron are converted to Uranium-233 or Plutonium-239, which are fissile materials. However, the fuel rods containing these materials also contain other reaction by-products. Many of these are highly radioactive, and require processing to recover the weapon-usable materials.

To do this, "spent" fuel rods are taken to a reprocessing plant where they are dissolved in nitric acid and the plutonium is separated from the solution in a series of chemical processing steps. Since the spent fuel rods are highly radioactive, heavy lead casks must be used to transport them. In addition, the rooms at the reprocessing plant where the chemical extraction of the plutonium occurs must have thick walls, lead shielding, and special ventilation to contain radiation hazards.

Iran Expects to be Acquitted in Next UN Nuclear Report

(Parisa Hafezi and Louis Charbonneau, Reuters)

<http://www.alertnet.org/thenews/newsdesk/L25555149.htm>

Wednesday, August 25

Iran said on Wednesday it has cleared up all major outstanding ambiguities over its nuclear programme to reassure the world it was not trying to make an atomic bomb, but diplomats at the U.N. disagreed.

Washington has accused Iran of secretly developing a nuclear weapons programme under cover of a civilian atomic energy programme. Iran says its ambitions are limited to the peaceful generation of electricity.

A senior Iranian official said the International Atomic Energy Agency (IAEA), the U.N. nuclear

watchdog, would give Iran's nuclear programme a clean bill of health in its next report, due to be circulated in the coming days among the members of the IAEA's board of governors.

Iran Says it is Producing Nuclear Defense Equipment
(Associated Press)

http://www.usatoday.com/news/world/2004-08-24-iran-nuclear_x.htm

Tuesday, August 24

Iran said Tuesday it was producing nuclear defense equipment to protect its citizens in case of any possible attack on its nuclear facilities, according to Tuesday media reports.

Defense Minister Ali Shamkhani said U.S. sanctions had forced Iran to seek self-sufficiency to meet all its defense requirements, the government-owned Persian daily Iran reported.

Lawmakers Question Security Preparations for Planned U.S. Plutonium Shipment to France
(Mike Nartker, Global Security Newswire)

http://www.nti.org/d_newswire/issues/2004_8_25.html#73BC06AF

Wednesday, August 25

Noting concerns that terrorists may attempt to influence the U.S. November elections through an attack, Democratic lawmakers this month have raised questions concerning the security of a planned shipment of more than 100 kilograms of plutonium to France (see GSN, June 14).

The U.S. Energy Department is expected next month to ship 140 kilograms of plutonium to France to be converted into mixed-oxide fuel for use in testing at a U.S. nuclear power plant for possible future energy generation. The project is intended to help advance a U.S.-Russian nonproliferation program to eliminate a combined total of almost 70 tons of plutonium.

N. Korea Continues Criticism of Bush
(Glenn Kessler, Washington Post)

<http://www.washingtonpost.com/wp-dyn/articles/A30014-2004Aug24.html>

Wednesday, August 25

For the second straight day, North Korea yesterday hurled unusually personal criticism at President Bush, calling him a "fascist tyrant" and "human trash." The official statements strongly suggested the communist nation is seeking to disrupt further talks on its nuclear programs before the U.S. presidential election, some U.S. officials said.

Senior-level talks are planned for next month, but North Korea has balked at holding working-level talks this month that would pave the way for another six-nation negotiating round. It told the Chinese it has substantive problems with holding such talks now.

Think Twice Before Targeting Iran

(Youssef M. Ibrahim, USA Today)

http://www.usatoday.com/news/opinion/columnist/2004-08-24-ibrahim_x.htm

Tuesday, August 24

This is the wrong time for the United States to take on Iran, the dominant demographic, military and cultural force of the Persian Gulf, as its new foe. Yet, that is exactly where the Bush administration is headed.

In the past few weeks, Bush administration officials, including national security adviser Condoleezza Rice, have said they will use any means to stop Iran from pursuing plans to build nuclear weapons. They leaked stories to the media about plans to bomb industrial sites in Iran, including the Bushehr nuclear reactor.

Iran's response was swift. Gen. Mohammad Baqer Zolqadr, the commander of Iran's Revolutionary Guards Corp, said that if attacked, Iran would "retaliate everywhere."

Nothing would unite Iranian moderates and hard-liners more than an attack on their country and, above all, the destruction of their prized nuclear reactor. Iranians are not easily intimidated. They lost nearly a million people in the eight-year Iran-Iraq war, launched by Saddam Hussein in 1980. In the end, the Iranians prevailed. Saddam backed down. How quickly we forget.

NRDC Nuclear Notebook: U.S. Nuclear Reductions

(Robert S. Norris and Hans M. Kristensen, Bulletin of the Atomic Scientists)

<http://www.thebulletin.org/issues/nukenotes/so04nukenote.html>

September/October 2004

On June 1, National Nuclear Security Administration chief Linton F. Brooks submitted a classified report to Congress detailing the plans that have been agreed to by the Energy and Defense Departments regarding reductions in the nuclear stockpile. Brooks said the stockpile would be reduced by "almost half" but declined to provide details about its new size or composition, citing classification reasons.

Such regrettable secrecy stems from ingrained practices developed during the Cold War. Greater stockpile transparency could help advance certain arms control and disarmament agreements and encourage measures to secure fissile material and warheads in Russia and elsewhere.

We estimate the current size of the U.S. nuclear stockpile, at the end of fiscal 2004, to be 10,350 warheads. To decipher the size and composition of the U.S. nuclear weapons stockpile is difficult, though not impossible. Having closely followed stockpile trends for more than two decades, we feel confident in our estimates. Useful declassified information has been released over the years; one such source is an Energy Department table that provides the number of warheads in the stockpile, the number of warheads built each year, and the total megatons each year from 1945 to 1961.

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