

NORTH KOREA'S PLUTONIUM DECLARATION: A STARTING POINT FOR AN INITIAL VERIFICATION PROCESS

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On December 27, Japan's *Tokyo Shimbun* newspaper quoted U.S. and North Korean officials saying that North Korea had declared a plutonium stockpile of about 30 kilograms. The report was subsequently picked up by several wires, including [AFP](#) and [UPI](#).

Based on discussions with a knowledgeable official, this roughly 30 kilograms of plutonium apparently refers to a stock of plutonium that North Korea separated from irradiated fuel produced in the five megawatt-electric reactor at Yongbyon. The separation of the plutonium occurred at the Radiochemical Laboratory at Yongbyon. If this quantity refers to separated plutonium (and not the total quantity of plutonium produced in the spent fuel of several reactor cores), **it does fall inside the lower bound of the range of the amount of separated plutonium that ISIS has assessed North Korea could now possess.**

North Korean Declaration

In early January 2008, [White House spokesperson Dana Perino confirmed](#) that the U.S. had not received a formal declaration from North Korea, as expected under the terms of the Six Party agreements. Perino stated that Deputy Secretary John Negroponte would be in Beijing in mid-January for further Six-Party discussions on North Korea and the pace of its nuclear disablement.

North Korea responded in a [statement on January 4, 2008](#) that it had notified the United States of its nuclear declaration in November and subsequently had discussions with U.S. officials about its contents. The United States did not view this declaration as comprehensive and reportedly asked North Korea for a complete one, including more on uranium enrichment and nuclear weaponization activities. In the January 4 statement, North Korea stated that it was "compelled to adjust the tempo of disablement" at Yongbyon, implying a slowdown in disablement.

Initial Verification Should Start Despite Questions on Uranium

Although North Korea's declaration must be viewed as a partial one, it should be seen as an initial step in a process aimed at achieving a complete declaration. An initial verification process could be initiated by representatives of the Six Party Talks or the International Atomic Energy Agency (IAEA), who would seek clarifications and additions to that declaration. North Korea has stated that it is willing to provide more details about its plutonium stock, including the amount of plutonium separated during each reprocessing campaign and the amount of plutonium used in the October 2006

nuclear test. The verification process would need to establish confidence that North Korea declares all of its plutonium, including the total amount of plutonium produced and its subsequent separation and use.

By focusing on plutonium, the negotiators would zero in on the material in North Korea's nuclear weapons, which are the primary target of any denuclearization effort. Few believe anymore that North Korea developed a program to produce highly enriched uranium for use in nuclear weapons. Given the relative importance of North Korea's plutonium stocks, it would be regrettable if progress were stymied over the issue of uranium. Negotiators should keep the uranium issue in perspective—continue seeking information to clarify North Korea's actions, but not risk fatal damage to the larger denuclearization process over a uranium enrichment program that fewer and fewer believe ever produced highly enriched uranium (HEU).

Total Plutonium Stock

The 30 kilograms declared does not appear to represent the total amount of plutonium North Korea produced at Yongbyon. The plutonium in the current core of the five megawatt-electric reactor is contained in irradiated fuel that is being unloaded into a storage pond near the reactor under U.S. supervision. In addition, the declared plutonium may not include the material North Korea used in its October 2006 nuclear detonation, roughly estimated to be about 5 kilograms of plutonium.

ISIS has reported on this issue previously, most recently in February 2007. [ISIS estimated then](#) that North Korea had produced a total plutonium stockpile of between 46 and 64 kilograms, of which 28-50 kilograms could be in separated form and usable in nuclear weapons. This assessment was based on a study of how much plutonium could have been produced in the fuel in the five megawatt-electric reactor and how much plutonium was subsequently separated in the Radiochemical Laboratory. North Korea has stated that it unloaded the core of this reactor twice—in 1994 and 2005. The IAEA discovered evidence of a possible earlier unloading, prior to 1990. In addition, some of the separated plutonium was used in the 2006 test explosion. There is also the plutonium in the current core. The assessment that North Korea could have a separated plutonium stockpile of between 28 and 50 kilograms includes the two core unloadings in 1994 and 2005, and the possible unloading prior to 1990, less five kilograms for the explosion in October 2006.

A separated plutonium declaration falling at the lower end of the range is bound to increase suspicions that North Korea intends to hide or hold back some of its plutonium. Recent media reports quote unnamed U.S. officials as stating that they expected a declaration that was closer to 50 kilograms of plutonium. Because of these suspicions, verification will be critical. North Korea's willingness to allow effective verification of their plutonium production and separation is required to build confidence in its plutonium declaration. An early start to verification will ensure that there is an avenue through which any revisions to the plutonium declaration can be received early in the process of dismantlement.

No Evidence that North Korea Sold or Transferred Plutonium to Another Country

Some may view a low separated plutonium declaration as indicative of a possible transfer of plutonium to another country, especially in light of alleged nuclear cooperation between North Korea and Syria. There is no evidence of any transfer of plutonium from North Korea to Syria or any other country. Furthermore, open source reports in Israel speculating that North Korea sold separated plutonium to Syria for use in assembling nuclear weapons at a secret site present no evidence of such a sale or even a plausible motivation for such a momentous act, particularly given the drastic consequences such a transfer would have for both countries. It would be extraordinarily difficult for North Korea and Syria to ensure that such a transfer would not be discovered. Both countries are also aware of the limited uses of separated plutonium, whereas other forms of nuclear cooperation or assistance could be explained away as having civil applications. North Korean officials in particular are likely to understand that such a transfer could be considered a *casus belli* by the United States with a highly uncertain outcome for the Pyongyang regime, not to mention the diplomatic Six Party process now well underway.