

Monitoring Stockpiles and Reductions

The ultimate goal of U.S.-Russian transparency efforts should be an integrated, comprehensive regime that would provide confidence that each side was reducing its total nuclear warhead and fissile material stockpiles to low levels, and that these stockpiles were safe and secure.²⁷ With U.S.-Russian relations as they are in the wake of the bombing of Yugoslavia, however, that goal is a long way off; U.S.-Russian political tensions and renewed concerns over protecting nuclear secrets on both sides are likely to make near-term progress on nuclear transparency extraordinarily difficult. Paradoxically, it appears that the best hopes would be for initiatives that were either very large (so that they might have some chance of addressing Russian security concerns and shifting the political environment in favor of cooperation) or very small (so that they could be pursued informally without drawing undue political attention in either country). A few of the steps that should be pursued are listed below.²⁸

NUCLEAR MATERIAL STOCKPILE DATA EXCHANGES

Achieving a better understanding of the actual quantities, forms, and locations of fissile material in each country is fundamental to cooperative efforts to secure, monitor, and reduce these dangerous stockpiles. The United States has openly published data on its plutonium stockpile and plutonium production, and is preparing to publish similar data concerning its HEU stockpile. As noted in Section III, preliminary U.S.-Russian discussions suggest that it may be possible to work out an informal arrangement under which Russia would provide data on its plutonium stockpile comparable to the data the United States has already published on its own stockpile, and the United States would provide the funding Russian experts need to compile the data. This informal approach, if successful, could then be applied for HEU inventories, once the United States releases that data. This would provide a rapid means to accomplish a substantial part of the stockpile data exchange agreed to by Presidents Clinton and Yeltsin in 1994 on a contracting basis, without requiring high-level formal negotiations that would draw widespread political attention. The cost would likely be only a few million dollars.

INTERNATIONAL MONITORING OF EXCESS FISSILE MATERIAL

A key issue in the U.S.-Russian-IAEA "Trilateral Initiative" described in Section III is who will pay the costs of monitoring materials in Russia. (To date, the United States has been paying both its own costs and the IAEA's costs of monitoring the small amount of excess material that is under IAEA verification so far in the United States.) Russia is very unlikely to be able or willing to provide the funding to pay these costs, a

²⁷ See, for example, discussion in *Management and Disposition of Excess Weapons Plutonium*, op. cit.

²⁸ For an excellent recent discussion of transparency measures, with some similar suggestions, see Oleg Bukharin and Kenneth Luongo, *U.S.-Russian Warhead Dismantlement Transparency: The Status, Problems, and Proposals*, Princeton, NJ: Center for Energy and Environmental Studies, Princeton University, Report 314, April 1999 (available at <http://www.princeton.edu/~ransac>).

problem that could stop the initiative in its tracks. The IAEA has proposed the creation of a special disarmament fund to pay for such costs, which might ultimately receive funds from mandatory assessments; the United States could kick-start the effort with an initial voluntary contribution to the fund, and could agree to pay for Russia's costs to host the IAEA inspections (a cost category very unlikely to be covered by an international fund). U.S. agreement to pay these costs could enable a significant nonproliferation and disarmament initiative to go forward, at a very modest cost (probably a few million dollars per year initially, and less after the arrangement is established).



In a lab-to-lab effort, U.S. and Russian weapons scientists are jointly developing transparency technologies and procedures to confirm the dismantlement of nuclear weapons without revealing classified information. The United States should offer a reciprocal initiative under which thousands of U.S. warheads would be placed in secure storage open to Russian monitoring, and committed to eventual dismantlement, if Russia agrees to do the same with thousands of its own warheads. As part of the package, the United States should also offer to provide financial help for warhead dismantlement in Russia, with reciprocal transparency to confirm the dismantlement. Source: DOE

A MAJOR TRANSPARENT WARHEAD REDUCTIONS OFFER, WITH ASSISTANCE FOR TRANSPARENT WARHEAD DISMANTLEMENT

With the current state of U.S.-Russian relations, there is very little chance that the START II treaty will be ratified and formal negotiations completed on a START III treaty incorporating the unprecedented transparency measures for the dismantlement of warheads envisioned in the Helsinki statement of 1997 before President Clinton leaves office. Even in the unlikely event that a framework agreement on START III and national missile defenses can be achieved by the end of President Clinton's term, dismantlement transparency measures are likely to be postponed or included

only as initial small-scale demonstrations. Informal reciprocal-unilateral initiatives—such as those launched by President Bush and Soviet President Gorbachev in 1991, which resulted in the pull-back and dismantlement of many thousands of nuclear weapons, without requiring formal negotiations—represent the only near-term hope for a breakthrough in transparent nuclear arms reductions. To gain acceptance on both sides in the current political environment, such an initiative would have to address concerns each side has about the other's nuclear stockpile. For example, President Clinton could offer to place a large fraction of the U.S. strategic reserve and tactical nuclear warheads (stockpiles unregulated by arms control to date, and which will represent the vast majority of the total U.S. warhead stockpile under START II) in secure storage open to Russian monitoring, and commit them to verifiable dismantlement (with specific procedures to be worked out later), if Russia would do the same with its comparable warhead stockpiles. This could address Russian concerns about the U.S. maintenance of a large stockpile of reserve strategic warheads that could be rapidly returned to missiles, and U.S. concerns

about the huge Russian tactical warhead stockpile. Within a few months, the majority of all the warheads in both sides' nuclear arsenals could be under reciprocal monitoring, and committed to dismantlement.²⁹ Indeed, technology exists that would make it possible to permanently and verifiably disable these warheads, pending their eventual dismantlement, rather than only subjecting them to monitoring.³⁰ As part of this package, the United States could offer to provide financial assistance for warhead dismantlement (e.g., \$90 million per year for a dismantlement rate of 3,000 per year, or roughly \$30,000 per warhead) in return for Russian agreement to a transparency package that would also be implemented reciprocally at the Pantex dismantlement facility in the United States. The transparency measures would have to be designed jointly by U.S. and Russian experts, to give both sides confidence that while the measures could help confirm that dismantlement was taking place, they would do so without revealing sensitive information or unduly interfering with maintenance of each side's nuclear stockpile. As noted earlier, preliminary U.S.-Russian lab-to-lab work in designing such measures is already under way; U.S. experts have already produced reports on the impact of a variety of dismantlement transparency approaches at U.S. facilities, and it would make sense for the United States to help finance a Russian effort to do the same with respect to Russian facilities.³¹

²⁹ For a description of this concept, see Matthew Bunn, "Act Now, Mr. President," *Bulletin of the Atomic Scientists*, March/April 1998. For a similar proposal applying to active-duty strategic forces, see Admiral Stansfield Turner, *Caging the Nuclear Genie: An American Challenge for Global Security*, Boulder, CO: Westview Press, 1997. See also Committee on Nuclear Policy, *Jump-START: Retaking the Initiative to Reduce Post-Cold War Nuclear Dangers*, Washington DC: Henry L. Stimson Center, February 1999 (available at <http://www.stimson.org/policy/jumpstart.htm>).

³⁰ See Matthew Bunn, "'Pit-Stuffing': How to Disable Thousands of Warheads and Easily Verify Their Dismantlement," *F.A.S. Public Interest Report*, March/April 1998.

³¹ See discussion in Luongo and Bukharin, "U.S.-Russian Warhead Dismantlement Transparency," *op. cit.*