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*Title:* Thoughts on U.S.-Russia Arms Control, Nonproliferation and Counter Terrorism Proposals

*Author(s):* James Doyle, N-4

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## **Thoughts on U.S. - Russia Arms Control, Nonproliferation and Counter Terrorism Proposals**

### **Jim Doyle – Los Alamos National Lab**

The Russians remain interested in formal strategic arms limitations and are willing to go to warhead totals lower than those in the SORT agreement (1,700 -2,200). A proposal to reduce deployed strategic arsenals to 1,000 - 1,500 warheads over five years (roughly half of SORT limits) could be explored.

- Potential joint work in this area would include the further development of warhead identification and dismantlement technologies and monitored storage while awaiting dismantlement. This research could be done in cooperation with the UK as much as is practical.
- In addition joint transparency measures associated with nuclear forces operation and maintenance could be explored. Some stockpile data exchanges could potentially facilitate reductions of both strategic and tactical nuclear arms.
- A series of joint monitoring experiments could be designed to develop and exercise various monitoring technologies.
- These might be arranged to cover different portions of a chain of custody verification model from warhead removal for a delivery vehicle through storage, dismantlement and conversion of fissile material to non-military purposes.
- This could be a multi-year joint technical research program that proceeded in coordination with negotiated, verifiable reductions
- To make rapid progress each side identify 100 nuclear warheads that will undergo jointly monitored elimination and conversion to material suitable for the fabrication of nuclear reactor fuel.

Declare a quantity of fissile materials associated with this scope of reductions to be excess to military needs and submit needs and available as international fuel supply.

- Begin joint transparency discussions to answer such questions as “how much HEU or PU can be declared in excess for every 50 or 100 warheads that are dismantled? Can military inventories of HEU and in PU be declared? What attributes for military fissile material stocks can be verified?
- What standards of confidence and transparency should be attained, keeping in mind that the U.S.-Russian practices may set precedents for future multilateral reductions?

### **Reduction and/or elimination of tactical nuclear weapons**

It is likely that this will be a very political issue given that Russia does not base nuclear weapons outside its territory and the symbolism of U.S. nuclear weapons in Europe. NATO willingness to draw back U.S. forward-deployed nuclear weapons could prompt Russia to make more transparent reductions in its non-strategic nuclear arsenal. Several potential cooperative efforts can be envisioned:

- Stockpile data exchange
- Reciprocal on-site inspections
- Storage monitoring
- Warhead dismantlement

Ratify the Comprehensive Test Ban Treaty (CTBT)

- Joint-U.S.-Russia Study confirming their confidence in the verification and monitoring capabilities of the CTBTO/International Monitoring System (IMS)

Resume negotiations on a fissile material cutoff treaty (FMCT) proposal.

- Conduct a joint U.S.-Russian studies on bringing India and Pakistan into such a regime.

Strategic Stability Measures

- Discussion of lower limits on strategic nuclear delivery vehicles and modes of delivery (ICBM vs aircraft). The Russians would like the confidence against breakout provided verifiable limits on U.S. delivery vehicles, including any such as conventional Trident that could be re-converted to nuclear missions.
- The area of missile defense is one in which Russian objections are more political than strategic. The US BMD system in Alaska provides more capability against Russian strategic forces than the planned European system but the Russians have objected more forcefully to the European system because it is seen as part of NATO/western encroachment of Russia.
  - Modes of joint operation for land-based BMD systems and radars is an area where progress could be made

Assess the proliferation consequences of further Bi-lateral nuclear arms reductions

- Will additional bi-lateral nuclear arms reductions create incentives or disincentives for proliferation around the world?
- A framework for assessing this in the case of U.S. reductions has been made by Chris Chyba at Princeton
- The U.S. and Russia could undertake a joint assessment of the effect of further bilateral reductions on several categories of states including:
  - Other Current nuclear powers
  - Determined Proliferators
  - Nations that rely on U.S. or Russia security guarantees
  - Other Non-Nuclear-Weapon States

Counter-terrorism

Joint technical work on:

- Global elimination of civil uses of HEU
- Improved physical security and life-cycle management for high-risk radiological source materials
- Reduction and consolidation of direct-use fissile materials
- Nuclear forensics for material origin and device design
- Development of improved radiation detection equipment for customs and border security
- Consider joint JTOT/NEST type exercises with Russian counterparts