

Fourth annual report of the International Panel on Fissile Materials

Global Fissile Material Report 2009: A Path to Nuclear Disarmament

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On the cover: the map shows existing and planned uranium enrichment and plutonium separation (reprocessing) facilities in nuclear weapon states.
See pages 21–22 and 90–91 of this report for more details.

Appendix 4A.

U.S. Proposal for Verification of North Korea's Denuclearization

The following text is a reproduction of an undated U.S. Government memo outlining the proposed approach to verify North Korea's declaration from 26 June 2008. The *Washington Post* posted the original document on its website in September 2008. It is also available at www.ncnk.org and www.ipfmlibrary.org/gov08.pdf.

VERIFICATION MEASURES DISCUSSION PAPER

Below is a list of measures that would be applied to undertake verification activities. These measures will form the basis for development of a verification implementation plan that assigns specific responsibilities and requirements. These measures provide a means to address all elements of a nuclear program, to include plutonium production, uranium enrichment, weapons, weapons production and testing, and proliferation activities.

The verification regime consists of experts of the six parties and is responsible to the Working Group on Denuclearization of the Korean Peninsula.

- Six Party Experts will be determined by their national governments, and will coordinate their actions in order to implement the agreed verification plan.
- Experts will be permitted to bring, utilize, and remove their own equipment in the course of exercising their responsibilities, to include measurement devices, radiation detection equipment, sampling materials and equipment, and GPS receivers.
- Experts will be permitted to use their own interpreters and translators.
- Experts will be allowed free communications, including attended and unattended transmission of information generated by containment and/or surveillance or measurement devices.
- Experts will be permitted to make use of internationally established systems of direct communications, including satellite systems and other forms of telecommunication.
- Experts will be given visas in a timely manner in order to conduct/support verification activities.
- If, in the course of implementing this plan, questions arise requiring resolution, either the expert or his/her designated representative may request a meeting to consult and clarify promptly. Should such a meeting not result in resolution of questions, any of the relevant parties may call for a meeting of the relevant parties to address the questions.
- Verification activities involving weaponization-related activities, information, facilities of material, will be conducted by experts from the Nuclear Weapons States as defined by the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Specifically, experts from the Nuclear Weapons States will:

- conduct all verification activities relating to nuclear weaponization, including verification of all related information, personnel, facilities or materials; and
- conduct sampling and forensic analysis and interviews of personnel as necessary to accomplish these verification activities.
- Information about weapons activities would be shared with the Six Party experts who are not from Nuclear Weapon States to the extent consistent with the NPT.
- Information sharing with the IAEA and IAEA access in these cases would be limited to select inspectors from Nuclear Weapons States, and granted to the extent necessary for the IAEA to carry out its safeguards and verification responsibilities.

The verification measures of the verification regime include visits to facilities, review of documents, interviews with technical personnel and other measures unanimously agreed among the relevant parties.

Visits: Experts must be allowed the following access in a prompt manner:

- Full access to all materials at any place on a site, facility or location where nuclear material, in any form, is or has been located, to include past and present facilities.
- Full access to any site, facility or location that does not contain nuclear material but is related to elements of nuclear program as declared or as determined by the relevant parties.
- Full access upon request to any site, facility or location in a declaration and any site, facility or location not contained in the declaration, for verification of the completeness and correctness of the declaration of nuclear program and to confirm the absence of undeclared nuclear material, equipment, and related activities.

Review of Documents: Experts will be given:

- Full access to records (fully preserved and maintained), including originals, and information systems (experts will have the right to make and remove from that Party copies or electronic media forms of copies) documenting nuclear material production, handling, and disposition, as well as other nuclear-related activities, to include:
 - the nuclear material control and accounting system;
 - records and reports showing inventories or nuclear material and changes in inventories, including receipts into and transfers out of the accounting system;
 - facility operations and design information, including facility modification and upgrade information;
 - data on the types, quantities and characteristics of declared nuclear material;
 - inventories, operating and production records, reports, logbooks or other records of any and all other facilities association with the design, development, or testing of elements of the nuclear program;

- a general description of any site, facility or location, including its use and content;
- transfer and receipt records of nuclear material, equipment, storage, containers, vehicles, and personnel; and
- records of all imports or exports of nuclear materials and nuclear-related equipment.
- Interviews with Technical Personnel: At any site, facility, or location, experts will be permitted to interview personnel, including scientists, technicians and facility managers.

Other Measures: At any site, facility, or location, experts will be permitted to undertake verification activities, including to:

- conduct and record visual observations, including by photographic and video-recording methods;
- utilize radiation detection equipment and other measurement devices;
- apply containment and surveillance systems and seals and other identifying and tamper indicating devices;
- conduct item-counting of nuclear materials;
- conduct forensic measurements of nuclear materials and equipment;
- collect and remove from that Party samples of nuclear materials, samples of equipment, environmental samples, and samples of nuclear waste in a manner consistent with denuclearization activities;
- record observations in personal notebooks; and
- remain on site for the period deemed necessary and re-visit any facilities, sites, or locations to check data and resolve any questions or discrepancies that arise during the verification process.
- as relates to a graphite-moderated reactor, collect, and remove from the Party physical samples of the graphite moderator after the core has been de-fueled.
- As relates to a research reactor, collect and remove from the Party samples of the aluminum core support structure, and from the reactor reflector elements.
- As relates to all nuclear materials, wastes, equipment, and facilities (fully preserved apart from denuclearization's activities) collect and remove from the Party samples and forensics measurements.
- The relevant parties may agree to additional measures to facilitate the verification process, including additional measures to help confirm the absence of undeclared nuclear material, equipment and related activities.

When necessary, the verification regime can welcome the IAEA to provide consultancy and assistance for relevant verification.

- The IAEA will apply safeguards measures appropriate to non-nuclear-weapons states in accordance with IAEA standards, principals, and practices to all nuclear material, nuclear fuel cycle, and nuclear fuel cycle-related facilities declared. Specifically, the Agency will:
 - establish material accountancy and control for all declared nuclear material pending its removal;
 - monitor the declared nuclear fuel cycle and nuclear fuel cycle-related facilities and nuclear material to provide a level of assurance that all nuclear activities have ceased and nuclear material or other items have not been tampered with;
 - undertake sampling and forensic analysis and interviews of personnel.
- The IAEA will share all data related to its safeguards activities and its evaluation of the declaration with all relevant parties, consistent with their respective international obligations, to support independent assessments by the relevant parties on the completeness and correctness of any declaration.