

Board of Governors General Conference

GOV/2007/45-GC(51)/19

Date: 17 August 2007

General DistributionOriginal: English

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Item 7(c) of the Board's provisional agenda (GOV/2007/38)
Item 19 of the Conference's provisional agenda (GC(51)/1)

Application of Safeguards in the Democratic People's Republic of Korea (DPRK)

Report by the Director General

A. Introduction

- 1. In his report to the 50th regular session of the General Conference (GC(50)/15) on 14 August 2006, the Director General stated, inter alia, that "since 31 December 2002, when on-site monitoring activities were terminated at the request of the DPRK, the Agency had been unable to draw any conclusions regarding the DPRK's nuclear activities".
- 2. Having considered the Director General's report, the General Conference adopted resolution GC(50)/RES/15, on 22 September 2006, in which it inter alia strongly urged the DPRK to return immediately to the Six-Party Talks without precondition and to work towards the expeditious implementation of the Joint Statement issued 19 September 2005, and in particular to implement fully its commitment to abandon all nuclear weapons and existing nuclear programmes, as a step towards the goal of the verifiable denuclearisation of the Korean Peninsula; called upon the DPRK to cooperate promptly with the Agency in the full and effective implementation of IAEA safeguards and to resolve any outstanding issues that may have arisen due to the long absence of safeguards; called upon the DPRK to comply fully with the Treaty on the Non-Proliferation of Nuclear Weapons; and stressed the essential verification role of the Agency. The General Conference also decided to include in the agenda for its fifty-first regular session an item entitled "Implementation of the NPT safeguards agreement between the Agency and the Democratic People's Republic of Korea".
- 3. The announcement by the DPRK on 9 October 2006 that it had conducted a nuclear test was discussed at the November 2006 meeting of the Board of Governors.

- 4. On 23 February 2007, the Director General received an invitation from the DPRK to visit the DPRK to "develop the relations between the DPRK and the Agency, as well as to discuss problems of mutual concerns". The Director General visited the DPRK on 13–14 March 2007 and reported to the Board of Governors in June 2007 that his discussions with DPRK officials were forward looking, and had focused on the potential for re-establishing the relationship between the DPRK and the Agency, and that the Agency remained ready to begin work with the DPRK on monitoring and verification of the shutdown and sealing of the Yongbyon nuclear facility, as foreseen in the Initial Actions for the Implementation of the Six Party Joint Statement on the Korean Peninsula Nuclear Issue agreed at the Six-Party Talks in Beijing on 13 February 2007.¹
- 5. On 3 July 2007, the Director General submitted to the Board of Governors a report on monitoring and verification in the DPRK (GOV/2007/36), in which he informed the Board of the results of a visit to the DPRK by an Agency team on 26–29 June 2007, and of the ad hoc arrangement for monitoring and verification as agreed between the Agency and the DPRK and foreseen in the Initial Actions agreed at the Six-Party Talks. On 9 July 2007, the Board of Governors authorized the Director General, subject to the availability of funds, to implement the ad hoc arrangement.
- 6. The current report, which is being submitted to the Board of Governors and the General Conference, covers developments since the fiftieth regular session of the General Conference regarding the application of safeguards in the DPRK and the developments since the Board of Governors authorized the implementation of the ad hoc arrangement.

B. Application of Safeguards in the DPRK

- 7. The Director General noted, most recently in his June 2007 statement to the Board of Governors, that the Agency had not performed any verification activities in the DPRK since December 2002, and had been unable to draw any conclusions regarding the DPRK's nuclear activities.
- 8. On 14 July 2007 an Agency team arrived at Yongbyon to implement the ad hoc monitoring and verification arrangement. On 17 July 2007 the Agency stated, following initial verification, that the DPRK has shut down the following installations at the Yongbyon nuclear facility: the Nuclear Fuel Fabrication Plant; the Radiochemical Laboratory (the reprocessing plant); the 5 MW(e) Experimental Nuclear Power Plant; and the 50 MW(e) Nuclear Power Plant all of which are located in Yongbyon; as well as the 200 MW(e) Nuclear Power Plant in Taechon.
- 9. Since 17 July 2007, the Agency has continued to monitor and verify the shut down status of the above mentioned installations and has implemented, with the cooperation of the DPRK, appropriate monitoring and verification measures as follows:
- (i) Nuclear Fuel Fabrication Plant: The Agency has identified key processes and essential equipment involved in the conversion of yellow cake to uranium metal. It installed containment and surveillance (C/S) measures, and made photographic records of the status of the facility. The DPRK

¹ "Initial Actions for the Implementation of the Joint Statement" issued as GOV/INF/2007/6 (2 March 2007). The "Joint Statement on the Korean Peninsula Nuclear Issue", issued as GOV/INF/2007/14, dated 2 July 2007, inter alia, stated that the DPRK committed to abandoning all nuclear weapons and existing nuclear programmes and returning, at an early date, to the Treaty on the Non-Proliferation of Nuclear Weapons and to IAEA safeguards.

provided access to the nuclear material located at the plant (uranium intermediate products, uranium metal ingots, UO₂ powder, fuel rods for the 5 MW(e) Experimental Nuclear Power Plant, and fuel rod cores for the 50 MW(e) Nuclear Power Plant) for monitoring. The DPRK agreed to provide the Agency with access to any location at the plant to perform the necessary periodic monitoring and verification activities.

- (ii) Radiochemical Laboratory: The Agency has identified the key processes and essential equipment. The Agency also noted the design changes made since 2002, which included the introduction of mechanical decladding, the installation of pulse columns for co-extraction and the conversion of PuO₂ to plutonium metal. The plutonium metal line at the facility now includes fluorination, melting and casting, but no further treatment of metal, which was stated to have taken place elsewhere. The nuclear material inventory of the Radiochemical Laboratory contains uranium solutions, and low-, medium-, and high-level wastes, which are now subject to Agency monitoring. The DPRK has informed the Agency that some of the wastes have been solidified and moved to a building, which the Agency has visited, located next to the Radiochemical Laboratory. The Agency has installed C/S measures and radiation monitoring devices covering key processes and equipment at the Radiochemical Laboratory. Where C/S measures cannot be applied because of practical reasons, the DPRK agreed to provide the Agency with access to any location at the plant to perform the necessary periodic monitoring and verification activities. The Agency also has made photographic records of the status of the facility.
- (iii) 5 MW(e) Experimental Nuclear Power Plant: The Agency has identified the technical buildings and essential equipment. The DPRK has stated that except for the nuclear fuel in the core, and a small number of damaged irradiated fuel rods in the transfer hatch and refueling machine, no other nuclear fuel is present at the facility. The Agency installed C/S and radiation monitoring devices covering the core, damaged irradiated fuel rods, and the spent fuel transfer routes and selected essential equipment. The Agency also has made photographic records of the status of the facility. The DPRK agreed to provide the Agency with access to any location at the plant to perform the necessary periodic monitoring and verification activities.
- (iv) 50 MW(e) Nuclear Power Plant: There has been no construction work at this installation since 2002. The Agency has made photographic records of the status of the plant. The Agency also has visited the location where the graphite for the reactor core is stored. The status of the facility is being confirmed through periodic visits.
- (v) 200 MW(e) Nuclear Power Plant: There has been no construction at this installation since 2002. The Agency has made photographic records of the status of the plant. The status of the facility is being confirmed through periodic visits.

C. Conclusion

10. The Agency has verified the shutdown status of the Yongbyon nuclear facility and is continuing to implement the ad hoc monitoring and verification arrangement with the cooperation of the DPRK.