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Application of Safeguards in the Democratic People's Republic of Korea

Report by the Director General

A. Introduction

- 1. The Director General's previous report on the Application of Safeguards in the Democratic People's Republic of Korea (DPRK) was submitted to the Board of Governors and to the 56th regular session of the General Conference on 30 August 2012 (GOV/2012/36-GC(56)/11). This report provided an update of developments of direct relevance to the Agency, along with information on the DPRK's nuclear programme.
- 2. Having considered the Director General's report, the General Conference adopted resolution GC(56)/RES/14 on 21 September 2012, and decided to remain seized of the matter and to include the item in the agenda for its 57th (2013) regular session.
- 3. The current report, which is being submitted to the Board of Governors and the General Conference, covers developments since the Director General's report of August 2012.

B. Background

4. The Agency has not been able to verify the correctness and completeness of the DPRK's declarations under the Agreement between the DPRK and the Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)

(hereinafter referred to as the "NPT Safeguards Agreement"). On 1 April 1993, the Board of Governors found, pursuant to Article 19 of the NPT Safeguards Agreement, that the Agency was not able to verify that there had been no diversion of nuclear material required to be safeguarded under the terms of the Agreement to nuclear weapons or other nuclear explosive devices, and decided to report the DPRK's non-compliance and the Agency's inability to verify such non-diversion to all Member States of the Agency, to the Security Council and to the General Assembly of the United Nations. Since 1994, the Agency has not been able to conduct all necessary safeguards activities provided for in the NPT Safeguards Agreement. From the end of 2002 until July 2007, the Agency was not able, and since April 2009 has not been able, to implement any safeguards measures in the DPRK.

5. Following the DPRK's nuclear tests in 2006 and 2009, the Security Council adopted resolutions 1718 (2006) and 1874 (2009), in which it, inter alia: demanded that the DPRK return to the NPT and IAEA safeguards and decided that the DPRK shall abandon all nuclear weapons and existing nuclear programmes in a complete, verifiable and irreversible manner and immediately cease all related activities; act strictly in accordance with the obligations applicable to parties under the NPT and the terms and conditions of its NPT Safeguards Agreement; and provide the Agency with transparency measures extending beyond these requirements, including such access to individuals, documentation, equipment and facilities as may be required and deemed necessary by the Agency. Contrary to the requirements of those resolutions, the DPRK has not abandoned its existing nuclear programme in a complete, verifiable and irreversible manner or ceased all related activities.

C. Recent Developments

- 6. As stated in the Director General's previous report,² in a meeting with officials of the DPRK's Permanent Mission in Vienna in June 2012, the Agency was informed that the effectiveness of the DPRK's invitation to the Agency of 16 March 2012 to "discuss technical issues with regard to the monitoring of [a] moratorium on uranium enrichment activities at Nyongbyon in accordance with the agreement of the DPRK-US high-level Talks held in Beijing...", had been "discontinued".
- 7. The DPRK announced on 12 February 2013 that, on the same date, it had conducted a third nuclear test. A,5 The radionuclide network of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (PrepCom CTBTO) made "a significant detection of radioactive noble gases that could be attributed to the nuclear test announced by the [DPRK]". Based

¹ The DPRK concluded an agreement with the Agency, based on INFCIRC/66/Rev.2, for the application of safeguards in respect of a research reactor (INFCIRC/252) in July 1977. Under this item-specific safeguards agreement, safeguards were applied by the Agency to two nuclear research facilities in Yongbyon: the IRT Research Reactor and a critical assembly. The DPRK acceded to the NPT in December 1985, although its NPT Safeguards Agreement with the Agency, based on INFCIRC/153 (Corrected), only entered into force in April 1992 (INFCIRC/403). As provided for in Article 23 of the NPT Safeguards Agreement, the application of safeguards under the earlier safeguards agreement (INFCIRC/252) is suspended while the NPT Safeguards Agreement is in force.

² GOV/2012/36-GC(56)/11, paras 7 and 8.

³ Nyongbyon is also known as Yongbyon.

⁴ 'KCNA Report on Successful 3rd Underground Nuclear Test', KCNA, 12 February 2013.

⁵ In response to the DPRK's announcement, the Security Council on 7 March 2013 adopted unanimously resolution 2094 (2013), which strengthened and expanded the scope of UN sanctions against the DPRK.

⁶ 'CTBTO Detects Radioactivity Consistent with 12 February Announced North Korean Nuclear Test', PrepCom CTBTO Press Release, 23 April 2013.

on the information available to it, the Agency has assessed that the radionuclides detected in the region were highly unlikely to have originated from a nuclear facility.⁷

8. On 1 April 2013, the Supreme People's Assembly of the DPRK announced that the DPRK would "bolster up the nuclear deterrence and nuclear retaliatory strike power both in quality and quantity...". On 2 April 2013, the General Department of Atomic Energy of the DPRK said it would take measures for "readjusting and restarting all the nuclear facilities in Nyongbyon including uranium enrichment plant and 5MW[(e)] graphite moderated reactor".

D. Other Information on the DPRK's Nuclear Programme

- 9. As the Agency remains unable to carry out verification activities in the DPRK, its knowledge of the DPRK's nuclear programme is limited and, as further nuclear activities have reportedly taken place in the country, that knowledge will have declined. Nevertheless, it is important for the Agency to remain cognisant of developments in that programme to the fullest extent possible, especially in light of encouragement by the General Conference that the Secretariat maintain its readiness to play an essential role in verifying the programme, including the capability to re-establish the implementation of safeguards related activities in the DPRK.¹⁰
- 10. In that regard, the Agency has maintained its readiness to return to the DPRK, if requested to do so by the DPRK and subject to approval by the Board of Governors, through an ongoing process of: collecting and evaluating safeguards relevant information regarding the DPRK's nuclear programme; preparing safeguards equipment and developing relevant procedures for its use; and staff training. The Agency has prepared, and continues to update, a detailed plan for the implementation of monitoring and verification activities in the DPRK.
- 11. The Agency continues to monitor, mainly through satellite imagery, developments at the Yongbyon site. Since the Director General's previous report, the Agency has continued to observe building renovation and new construction activities at various locations within the site. Although the purpose of such activities cannot be determined through satellite imagery alone, they appear to be broadly consistent with the DPRK's statements that it is further developing its nuclear capabilities.
- 12. As previously reported,¹¹ the DPRK stated in April 2009 that it would build a light water reactor (LWR). In November 2010, a group visiting the Yongbyon site was shown a building that was stated to be a future 100 MW(th) LWR.¹² Since the Director General's previous report, the Agency has observed through satellite imagery continued construction activities on and around that building. These activities include the installation of a ventilation stack, the construction of an electrical switchyard and the excavation of trenches apparently to accommodate water pipes for cooling the

⁷ The Agency's radionuclide and atmospheric transport modelling analysis is based on data published on the PrepCom CTBTO website.

⁸ 'Law on Consolidating Position of Nuclear Weapons State Adopted', KCNA, 1 April 2013.

⁹ 'DPRK to Adjust Uses of Existing Nuclear Facilities', KCNA, 2 April 2013. The Agency refers to this reactor as the Experimental Nuclear Power Plant 5 MW(e).

¹⁰ GC(56)/RES/14, para 8.

¹¹ GOV/2011/53-GC(55)/24, para. 31.

¹² GOV/2011/53-GC(55)/24, para. 37.

reactor. As of June 2013, external work on the building appeared to have been completed, but no indications of the delivery or installation of major reactor components had been observed. Without access to the site, the Agency is unable to assess either the design features of the LWR or the likely date for its completion.

- 13. During the period March to June 2013, the Agency observed through satellite imagery construction activities on buildings adjacent to the 5 MW(e) reactor building and the excavation of trenches in the vicinity of the reactor. These trenches appear to be related to the reconfiguration of the reactor's cooling system. If this is the case, such a reconfiguration could possibly enable the reactor to be restarted without rebuilding the cooling tower. As of April 2009, the Agency had observed that the DPRK had a stockpile of approximately 2000 fresh fuel rods for the 5 MW(e) reactor and enough uranium present in other forms that, if further processed into fuel rods, together would be sufficient to provide a full core load for the reactor. Since the Agency has had no access to the 5 MW(e) reactor or related facilities since April 2009, it is not possible to determine when the reactor may start operation.
- 14. During March 2013, the DPRK began the construction of an extension to the building housing the reported centrifuge enrichment facility within the Fuel Rod Fabrication Plant.¹³ Without access to the site, the Agency cannot confirm the purpose of this construction activity. The Agency has no further information regarding this facility and remains unable to determine its configuration or operational status.

E. Summary

- 15. The nuclear programme of the DPRK remains a matter of serious concern. The DPRK's statements concerning its conducting of a third nuclear test and its intention to readjust and restart its nuclear facilities at Yongbyon, together with its previous statements about uranium enrichment activities and the construction of an LWR, are deeply regrettable. Such actions are clear violations of relevant UN Security Council resolutions.
- 16. The Director General continues to call upon the DPRK to comply fully with its obligations under relevant Security Council resolutions, to cooperate promptly with the Agency in the full and effective implementation of its NPT Safeguards Agreement and to resolve all outstanding issues, including those that have arisen during the absence of Agency inspectors from the DPRK. The Agency will continue to maintain its readiness to play an essential role in verifying the DPRK's nuclear programme.

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¹³ GOV/2011/53-GC(55)/24, paras 33-34.