

Board of Governors

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Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran

Report by the Director General

1. On 4 February 2006, the Board of Governors adopted a resolution (GOV/2006/14) in paragraph 1 of which it, inter alia, underlined that outstanding questions concerning the implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran¹ (Iran) could best be resolved and confidence built in the exclusively peaceful nature of Iran's nuclear programme by Iran responding positively to the Board's calls for confidence building measures. In this context, the Board deemed it necessary for Iran to:

- re-establish full and sustained suspension of all enrichment related and reprocessing activities, including research and development, to be verified by the Agency;
- reconsider the construction of a research reactor moderated by heavy water;
- ratify promptly and implement in full the Additional Protocol;
- pending ratification, continue to act in accordance with the provisions of the Additional Protocol which Iran signed on 18 December 2003;
- implement transparency measures, as requested by the Director General, including in GOV/2005/67, which extend beyond the formal requirements of the Safeguards Agreement and Additional Protocol, and include such access to individuals, documentation relating to procurement, dual use equipment, certain military-owned workshops and research and development as the Agency may request in support of its ongoing investigations.

2. In paragraph 2 of that resolution, the Board requested the Director General to report to the United Nations Security Council that the steps set out in paragraph 1 of the resolution were required of Iran by the Board and to report to the Security Council all IAEA reports and resolutions, as adopted, relating to this issue. In paragraph 8 of GOV/2006/14, the Board also requested the Director General to report on the implementation of that resolution, and previous resolutions, to the next regular session

¹ INFCIRC/214.

of the Board, for its consideration, and immediately thereafter to convey, together with any resolution from the March Board, that report to the Security Council.

3. Following receipt by the Security Council of the Director General's report (GOV/2006/15), the President of the Security Council made a statement on behalf of the Council (reproduced in GOV/INF/2006/7) in which the Council, inter alia, called upon Iran to take the steps required by the Board of Governors, notably in the first operative paragraph of its resolution GOV/2006/14, which are essential to build confidence in the exclusively peaceful purpose of its nuclear programme and to resolve outstanding questions, and underlined, in this regard, the particular importance of re-establishing full and sustained suspension of all enrichment related and reprocessing activities, including research and development, to be verified by the Agency. The Security Council requested in 30 days a report from the Director General on the process of Iranian compliance with the steps required by the Board of Governors, to the Board and in parallel to the Security Council for its consideration.

4. This report is being submitted to the Board and in parallel to the Security Council. It provides an update on the developments that have taken place since March 2006 in the implementation of Iran's Safeguards Agreement, on the Agency's verification of Iran's implementation of the confidence building measures requested by the Board of Governors, and on the Agency's overall assessment in connection with the implementation of Iran's Safeguards Agreement.

A. Developments since March 2006

5. On 13 April 2006, at the invitation of Iran, the Director General and an Agency team met in Tehran with the President of the Atomic Energy Organization of Iran (AEOI), the Secretary of the Supreme National Security Council of Iran and other Iranian officials to discuss issues relevant to the verification of the correctness and completeness of Iran's declarations. The Director General urged Iran to accelerate substantially its cooperation with the Agency on the outstanding verification issues, and underlined the importance of Iran's implementation of the confidence building measures requested by the Board of Governors.

6. On 27 April 2006, the Director General received from Iran a letter of the same date in which it stated, inter alia, the following:

- “1 - Islamic Republic of Iran has fully cooperated with the Agency during the past three years in accordance with the NPT Comprehensive Safeguards, the Additional Protocol and even beyond the Additional Protocol which was voluntarily implemented as if it was ratified.
- “2 - Islamic Republic of Iran has granted the full and unrestricted access to nuclear facilities during the past three years in the course of around 2000 man-day inspections.
- “3 - All nuclear facilities and activities have been under the Agency's Safeguards.
- “4 - Nuclear materials have been declared to the Agency and have been accounted for.
- “5 - Islamic Republic of Iran is fully committed to its obligations under the NPT and the comprehensive Safeguards Agreement (INFCIRC/153).

“6 - Islamic Republic of Iran is fully prepared to continue granting the Agency’s inspection in accordance with the Comprehensive Safeguards provided that the Iran’s nuclear dossier will remain, in full, in the framework of the IAEA and under its safeguards, the Islamic Republic of Iran is prepared to resolve the remaining outstanding issues reflected in [the Director General’s] report GOV/2006/15 of 27 February 2006, in accordance with the international laws and norms. In this regard, Iran will provide a time table within next three weeks.”

A.1. Enrichment Programme

7. As noted in the Director General’s report of 27 February 2006 (GOV/2006/15), the Agency has repeatedly requested Iran to provide additional information on certain issues related to its enrichment programme. Iran declined to discuss these matters at the 12–14 February 2006 meeting in Tehran referred to in paragraph 6 of GOV/2006/15 on the grounds that, in its view, they were not within the scope of the Safeguards Agreement. Iran reasserted this position in a meeting which took place with Agency inspectors in Tehran on 8 April 2006. The Agency reiterated that it was essential to resolve these questions so that the Agency can verify the correctness and completeness of Iran’s declarations, particularly in light of the two decades of concealed activities. The current status of these outstanding issues is as follows.

A.1.1. Contamination

8. Although the results of the Agency’s analyses to date tend, on balance, to support Iran’s statement regarding the foreign origin of most of the high enriched uranium (HEU) contamination which was found at locations where Iran has declared that centrifuge components had been manufactured, used and/or stored, the Agency is continuing to investigate the source(s) of low enriched uranium particles, and some HEU particles, found at those locations.²

9. Since it will be difficult to establish a definitive conclusion with respect to the origin of all of the contamination, it is essential for the Agency to make progress in ascertaining the scope and chronology of Iran’s centrifuge enrichment programme. The implementation of the Additional Protocol and Iran’s full cooperation in this regard are essential for the Agency be able to provide the required assurance concerning the absence of undeclared nuclear material and activities in Iran.

A.1.2. Acquisition of P-1 centrifuge technology

10. As noted in previous reports, the Agency was shown by Iran in January 2005 a copy of a handwritten one-page document reflecting an offer said to have been made to Iran in 1987 by a foreign intermediary.³ In order to be able to ascertain its nature and origin, a copy of the document is needed by the Agency. However, Iran continues to decline the Agency’s request for a copy of the document.

11. As previously reported, according to Iran, there were no contacts by Iran with the network between 1987 and mid-1993, when discussions leading to the later offer in the mid-1990s are said to

² GOV/2006/15, paras 7–10.

³ Most recently in GOV/2006/15, para. 11. The document related to the possible supply of: a disassembled centrifuge; drawings, specifications and calculations for a “complete plant”; and materials for 2000 centrifuge machines. The document also made reference, inter alia, to uranium re-conversion and casting capabilities. Iran has repeatedly stated that that document was the only remaining documentary evidence relevant to the scope and content of the 1987 offer, attributing this to the secret nature of the programme and the management style of the AEOI at that time. Iran has stated that no other written evidence exists, such as meeting minutes, administrative documents, reports, personal notebooks or the like, to substantiate its statements concerning that offer.

have been initiated.⁴ Statements made by Iran and key members of the network about the events leading to the mid-1990s offer are still at variance with each other. Iran has yet to provide further clarification in this regard. Iran has also said that it is unable to provide any documentation or other information about the meetings that led to its acquisition of 500 sets of P-1 centrifuge components in the mid-1990s. The Agency is still awaiting clarification of the dates and contents of the shipments containing those components.

A.1.3. Acquisition of P-2 centrifuge technology

12. As reflected in the Director General's previous report, Iran still maintains that, after having received the drawings for P-2 components in 1995, it carried out no work on P-2 centrifuges until 2002, and that at no time during the intervening period did it ever discuss with the intermediaries the P-2 centrifuge design or the possible supply of P-2 centrifuge components.⁵ Iran also continues to maintain that there were no deliveries of any centrifuge components after 1995.

13. In connection with the research and development (R&D) work on a modified P-2 design, said by Iran to have been carried out by a contracting company between early 2002 and July 2003, Iran has confirmed that the contractor had made enquiries about, and purchased, magnets suitable for the P-2 centrifuge design. In February 2006, Iran provided some additional clarification about the types of P-2 magnets that it had received, but maintained that only a limited number of magnets had been delivered. The Agency is still investigating this matter.

14. In mid-April 2006, there were several reports in the press about statements by high level Iranian officials concerning R&D and testing of P-2 centrifuges by Iran. The Agency has asked Iran to clarify these statements.

A.2. Uranium Metal

15. The references to uranium re-conversion and casting capabilities in the one-page document mentioned in paragraph 10 above have taken on greater significance in light of the existence of the 15-page document shown to the Agency by Iran describing the procedures for the reduction of UF₆ to uranium metal in small quantities, and for the casting of enriched and depleted uranium metal into hemispheres.⁶

16. As previously reported, although there is no indication about the actual use of the latter document or when it was received, its existence in Iran is a matter of concern. The Agency is aware that the intermediaries had this document, as well as other similar documents, which it has seen in other Member States. Therefore, it is essential that the Agency be able to understand the full scope of the offer made by the network in 1987 and to confirm what was obtained by Iran in connection with that offer, and when. To do so, it is necessary for the Agency to have a copy of the 15-page document, so that it can follow up further on these issues. However, Iran has continued to decline the Agency's request for a copy.

⁴ GOV/2006/15, para. 15.

⁵ GOV/2006/15, para. 18.

⁶ GOV/2006/15, paras 20–22. According to Iran, the document was provided on the initiative of the intermediaries, and not at the request of the AEOI. The document is currently under Agency seal.

A.3. Plutonium Experiments

17. As indicated earlier, the Agency has been following up with Iran information provided by Iran concerning experiments involving the separation of small (milligram) quantities of plutonium.⁷ After having received Iran's further clarifications on 15 February 2006, and the results of additional sample analyses which confirmed the Agency's earlier findings, the Agency provided Iran on 30 March 2006 with an updated summary of its overall analysis of this issue. On 10 April 2006, the Agency met with Iranian officials to seek further explanations concerning the inconsistencies identified in that analysis. Following that meeting, in a letter dated 17 April 2006, Iran reaffirmed its previous explanations of the inconsistencies. In the light of the Agency's findings, the Agency cannot exclude the possibility — notwithstanding the explanations provided by Iran — that the plutonium analysed by the Agency was derived from source(s) other than the ones declared by Iran.

A.4. Heavy Water Research Reactor

18. On 22 April 2006, the Agency visited the Iran Nuclear Research Reactor (IR-40) at Arak to carry out design information verification and confirmed that the civil engineering work was still ongoing.

A.5. Other Implementation Issues

19. There are no new developments to report with respect to Iran's uranium mining activities.⁸

20. There are also no new developments to report with respect to Iran's experiments involving polonium.⁹

21. On 9–11 April 2006, the Agency discussed with Iran the routine safeguards measures to be implemented at the Uranium Conversion Facility (UCF) at Esfahan and the Pilot Fuel Enrichment Plant (PFEP) at Natanz. When fully implemented, the measures proposed by the Agency should allow it to meet all of the safeguards objectives for these facilities. Although agreement was reached on most of the measures, Iran still has reservations about the remote transmission of encrypted safeguards data to Agency Headquarters in Vienna.

22. On 11 April 2006, the Agency visited the Fuel Enrichment Plant (FEP) at Natanz, and observed that civil construction was ongoing.

A.6. Voluntary Implementation of the Additional Protocol

23. Since 5 February 2006, Iran has not been implementing the provisions of its Additional Protocol.

A.7. Transparency Visits and Discussions

24. Since 2004, the Agency has repeatedly requested additional information and clarifications related to efforts made by the Physics Research Centre (PHRC), which had been established at Lavisan-Shian, to acquire dual use materials and equipment that could also be used in uranium enrichment and

⁷ GOV/2006/15, paras 23–26.

⁸ GOV/2005/67, paras 26–31.

⁹ GOV/2005/67, para. 34; GOV/2004/83, para. 84.

conversion activities.¹⁰ The Agency also requested interviews with the individuals involved in the acquisition of those items, including two former Heads of the PHRC.

25. As previously reported, the Agency met in February 2006 with one of the former Heads of the PHRC, who had been a university professor at a technical university while he was Head of the PHRC.¹¹ The Agency took environmental samples from some of the equipment said to have been procured for use by the university, the results of which are currently being assessed and discussed with Iran. Although Iran agreed to provide further clarifications in relation to efforts to procure balancing machines, mass spectrometers, magnets and fluorine handling equipment, the Agency has yet to receive such clarifications. Further access to the procured equipment is necessary for environmental sampling. Iran has continued to decline requests by the Agency to interview the other former Head of the PHRC.

26. In January 2006, Iran provided some clarification of its efforts in 2000 to procure some other dual use material (high strength aluminium, special steels, titanium and special oils). Iran agreed to provide additional information on these efforts, some of which the Agency has since received from Iran. Iran also presented information on its acquisition of corrosion resistant steel, valves and filters for UCF. In January 2006, environmental samples were taken from these latter items, the results of which are still pending.

27. As previously reported, the Deputy Director General for the Department of Safeguards met with Iranian authorities in February 2006 to discuss alleged studies related to the so-called Green Salt Project, to high explosives testing and to the design of a missile re-entry vehicle, all of which could have a military nuclear dimension and which appear to have administrative interconnections.¹²

28. As indicated in GOV/2006/15, Iran stated that the allegations with regard to the Green Salt Project “are based on false and fabricated documents so they were baseless,” and that neither such a project nor such studies exist or had existed. Iran stated that all national efforts had been devoted to the UCF project, and that it would not make sense to develop indigenous capabilities to produce UF₄ when such technology had already been acquired from abroad. However, according to information provided earlier by Iran, the company alleged to have been associated with the Green Salt Project had been involved in procurement for UCF and in the design and construction of the Gchine uranium ore processing plant.

29. The Agency is assessing the information provided by Iran during these discussions concerning the Green Salt Project, as well as other information available to it. However, Iran has yet to address the other topics of high explosives testing and the design of a missile re-entry vehicle.

¹⁰ According to Iran, the PHRC was established at Lavisan-Shian in 1989, inter alia, to “support and provide scientific advice and services to the Ministry of Defence” (GOV/2004/60, para. 43).

¹¹ Iran informed the Agency that the PHRC had attempted to acquire the electric drive equipment, the power supply equipment and the laser equipment, and had successfully purchased vacuum equipment for R&D in various departments of the university. The professor explained that his expertise and connections, as well as resources available at his office in the PHRC, had been used for the procurement of equipment for the technical university.

¹² GOV/2006/15, paras 38 and 39.

A.8. Suspension

30. In a letter dated 3 January 2006, Iran informed the Agency that it had decided to resume, as from 9 January 2006, “those R&D on the peaceful nuclear energy programme which ha[d] been suspended as part of its expanded voluntary and non-legally binding suspension”.¹³

31. In February 2006, Iran started enrichment tests at PFEP by feeding UF₆ gas into a single P-1 machine, and later into 10-machine and 20-machine cascades. During March 2006, a 164-machine cascade was completed, and tests of the cascade using UF₆ were begun. On 13 April 2006, Iran declared to the Agency that an enrichment level of 3.6% had been achieved. On 18 April 2006, the Agency took samples at PFEP, the results of which tend to confirm as of that date the enrichment level declared by Iran. On that day, UF₆ gas was again being fed into the 164-machine cascade, and two additional 164-machine cascades were under construction. The enrichment process at PFEP, including the feed and withdrawal stations, is covered by Agency safeguards containment and surveillance measures.

32. The current uranium conversion campaign at UCF, which was initiated in November 2005, is still ongoing and is expected to be finished in April 2006. Since September 2005, approximately 110 tonnes of UF₆ has been produced at UCF, all of which remains under Agency containment and surveillance.

B. Current overall assessment¹⁴

33. All the nuclear material declared by Iran to the Agency is accounted for. Apart from the small quantities previously reported to the Board, the Agency has found no other undeclared nuclear material in Iran. However, gaps remain in the Agency’s knowledge with respect to the scope and content of Iran’s centrifuge programme. Because of this, and other gaps in the Agency’s knowledge, including the role of the military in Iran’s nuclear programme, the Agency is unable to make progress in its efforts to provide assurance about the absence of undeclared nuclear material and activities in Iran.

34. After more than three years of Agency efforts to seek clarity about all aspects of Iran’s nuclear programme, the existing gaps in knowledge continue to be a matter of concern. Any progress in that regard requires full transparency and active cooperation by Iran — transparency that goes beyond the measures prescribed in the Safeguards Agreement and Additional Protocol — if the Agency is to be able to understand fully the twenty years of undeclared nuclear activities by Iran. Iran continues to facilitate the implementation of the Safeguards Agreement and had, until February 2006, acted on a voluntary basis as if the Additional Protocol were in force. Until February 2006, Iran had also agreed to some transparency measures requested by the Agency, including access to certain military sites. Additional transparency measures, including access to documentation, dual use equipment and relevant individuals, are, however, still needed for the Agency to be able to verify the scope and nature

¹³ GOV/INF/2006/1.

¹⁴ A detailed overall assessment of Iran’s nuclear programme and the Agency’s efforts to verify Iran’s declarations with respect to that programme was most recently provided to the Board of Governors by the Director General in February 2006. See GOV/2006/15, paras 46–54.

of Iran's enrichment programme, the purpose and use of the dual use equipment and materials purchased by the PHRC, and the alleged studies which could have a military nuclear dimension.

35. Regrettably, these transparency measures are not yet forthcoming. With Iran's decision to cease implementing the provisions of the Additional Protocol, and to confine Agency verification to the implementation of the Safeguards Agreement, the Agency's ability to make progress in clarifying these issues, and to confirm the absence of undeclared nuclear material and activities, will be further limited, and Agency access to activities not involving nuclear material (such as research into laser isotope separation and the production of sensitive components of the nuclear fuel cycle) will be restricted.¹⁵

36. While the results of Agency safeguards activities may influence the nature and scope of the confidence building measures that the Board requests Iran to take, it is important to note that safeguards obligations and confidence building measures are different, distinct and not interchangeable. The implementation of confidence building measures is no substitute for the full implementation at all times of safeguards obligations. In this context, it is also important to note that the Agency's safeguards judgements and conclusions in the case of Iran, as in all other cases, are based on verifiable information available to the Agency, and are therefore, of necessity, limited to past and present nuclear activities. The Agency cannot make a judgement about, or reach a conclusion on, future compliance or intentions.

37. The Agency will pursue its investigation of all remaining outstanding issues relevant to Iran's nuclear activities, and the Director General will continue to report as appropriate.

¹⁵ In this context, it is important to recall that, in September 2005, the Director General informed the Board of Governors that certain aspects of Iran's declarations would be followed up as a routine safeguards implementation matter (particularly in connection with conversion activities, laser enrichment, fuel fabrication and the heavy water research reactor programme) (GOV/2005/67, para. 43). Implicit in this statement was the understanding that the Agency would be able to follow up on these matters through the implementation of the Safeguards Agreement and the Additional Protocol. With the suspension of Iran's voluntary implementation of the Additional Protocol, the Agency's ability to do so will be restricted.