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(GOV/2012/2)

## Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran

*Report by the Director General*

### A. Introduction

1. This report of the Director General to the Board of Governors and, in parallel, to the Security Council, is on the implementation of the NPT Safeguards Agreement<sup>1</sup> and relevant provisions of Security Council resolutions in the Islamic Republic of Iran (Iran).
2. The Security Council has affirmed that the steps required by the Board of Governors in its resolutions<sup>2</sup> are binding on Iran.<sup>3</sup> The relevant provisions of the aforementioned Security Council resolutions were adopted under Chapter VII of the United Nations Charter, and are mandatory, in accordance with the terms of those resolutions.<sup>4</sup>

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<sup>1</sup> The Agreement between Iran and the Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons (INFCIRC/214), which entered into force on 15 May 1974.

<sup>2</sup> The Board of Governors has adopted eleven resolutions in connection with the implementation of safeguards in Iran: GOV/2003/69 (12 September 2003); GOV/2003/81 (26 November 2003); GOV/2004/21 (13 March 2004); GOV/2004/49 (18 June 2004); GOV/2004/79 (18 September 2004); GOV/2004/90 (29 November 2004); GOV/2005/64 (11 August 2005); GOV/2005/77 (24 September 2005); GOV/2006/14 (4 February 2006); GOV/2009/82 (27 November 2009); and GOV/2011/69 (18 November 2011).

<sup>3</sup> In resolution 1929 (2010), the Security Council: affirmed, inter alia, that Iran shall, without further delay, take the steps required by the Board in GOV/2006/14 and GOV/2009/82; reaffirmed Iran's obligation to cooperate fully with the IAEA on all outstanding issues, particularly those which give rise to concerns about the possible military dimensions of the Iranian nuclear programme; decided that Iran shall, without delay, comply fully and without qualification with its Safeguards Agreement, including through the application of modified Code 3.1 of the Subsidiary Arrangements; and called upon Iran to act strictly in accordance with the provisions of its Additional Protocol and to ratify it promptly (operative paras 1–6).

<sup>4</sup> The United Nations Security Council has adopted the following resolutions on Iran: 1696 (2006); 1737 (2006); 1747 (2007); 1803 (2008); 1835 (2008); and 1929 (2010).

3. By virtue of its Relationship Agreement with the United Nations,<sup>5</sup> the Agency is required to cooperate with the Security Council in the exercise of the Council's responsibility for the maintenance or restoration of international peace and security. All Members of the United Nations agree to accept and carry out the decisions of the Security Council,<sup>6</sup> and in this respect, to take actions which are consistent with their obligations under the United Nations Charter.

4. This report addresses developments since the last report (GOV/2011/65, 8 November 2011), as well as issues of longer standing. It focuses on those areas where Iran has not fully implemented its binding obligations, as the full implementation of these obligations is needed to establish international confidence in the exclusively peaceful nature of Iran's nuclear programme.

## **B. Clarification of Unresolved Issues**

5. On 18 November 2011, the Board of Governors adopted resolution GOV/2011/69 in which, inter alia, it stressed that it was essential for Iran and the Agency to intensify their dialogue aimed at the urgent resolution of all outstanding substantive issues for the purpose of providing clarifications regarding those issues, including access to all relevant information, documentation, sites, material, and personnel in Iran. The Board also called on Iran to engage seriously and without preconditions in talks aimed at restoring international confidence in the exclusively peaceful nature of Iran's nuclear programme. In light of this, and following an exchange of letters between the Agency and Iran, it was agreed that an Agency team would visit Iran for talks.

6. From 29 to 31 January 2012, an Agency team held a first round of talks in Tehran with Iranian officials aimed at resolving all outstanding issues. During the talks:

- The Agency explained its concerns and identified the clarification of possible military dimensions to Iran's nuclear programme as the top priority.
- The Agency requested access to the Parchin site, but Iran did not grant access to the site at that time.
- The Agency and Iran had an initial discussion on the approach to clarifying all outstanding issues in connection with Iran's nuclear programme, including issues to be addressed, initial actions and modalities.<sup>7</sup>
- A draft discussion paper on a structured approach to the clarification of all outstanding issues in connection with Iran's nuclear programme was prepared for further consideration.

7. Following that first meeting, exchanges between Iran and the Agency resulted in further elaboration of the structured approach.

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<sup>5</sup> The Agreement Governing the Relationship between the United Nations and the IAEA entered into force on 14 November 1957, following approval by the General Conference, upon recommendation of the Board of Governors, and approval by the General Assembly of the United Nations. It is reproduced in INFCIRC/11 (30 October 1959), Part I.A.

<sup>6</sup> The Charter of the United Nations, Article 25.

<sup>7</sup> These modalities related, inter alia, to Iran's security concerns, ensuring confidentiality and ensuring that Iran's cooperation included provision of access for the Agency to all relevant information, documentation, sites, material and personnel in Iran.

8. During the second round of talks in Tehran, which took place from 20 to 21 February 2012:
- The Agency reiterated its request for access to Parchin. Iran stated that it was still not able to grant access to that site.
  - An intensive discussion was held on the structured approach to the clarification of all outstanding issues related to Iran's nuclear programme. No agreement was reached between Iran and the Agency, as major differences existed with respect to the approach.
  - In response to the Agency's request, Iran provided the Agency with an initial declaration in connection with the issues identified in Section C of the Annex to the Director General's November 2011 report to the Board of Governors (GOV/2011/65). Iran's declaration dismissed the Agency's concerns in relation to the aforementioned issues, largely on the grounds that Iran considered them to be based on unfounded allegations.
  - The Agency gave a presentation to Iran on the Agency's initial questions on Parchin and the foreign expert,<sup>8</sup> and provided clarification of the nature of the Agency's concerns and the information available to it, in this regard.

## C. Facilities Declared under Iran's Safeguards Agreement

9. Under its Safeguards Agreement, Iran has declared to the Agency 15 nuclear facilities and nine locations outside facilities where nuclear material is customarily used (LOFs).<sup>9</sup> Notwithstanding that certain of the activities being undertaken by Iran at some of the facilities are contrary to the relevant resolutions of the Board of Governors and the Security Council, as indicated below, the Agency continues to implement safeguards at these facilities and LOFs.

## D. Enrichment Related Activities

10. Contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran has not suspended its enrichment related activities in the following declared facilities, all of which are nevertheless under Agency safeguards.

### D.1. Natanz: Fuel Enrichment Plant and Pilot Fuel Enrichment Plant

11. **Fuel Enrichment Plant (FEP):** There are two cascade halls at FEP: Production Hall A and Production Hall B. According to design information submitted by Iran, eight units are planned for Production Hall A, with 18 cascades in each unit. No detailed design information has yet been provided for Production Hall B.

12. As of 19 February 2012, 54 cascades were installed in three of the eight units in Production Hall A, 52 of which were declared by Iran as being fed with UF<sub>6</sub>.<sup>10</sup> Whereas initially each installed cascade comprised 164 centrifuges, Iran subsequently modified 30 of the cascades to contain 174 centrifuges each.

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<sup>8</sup> As referred to in Section C of the Annex to GOV/2011/65.

<sup>9</sup> All of the LOFs are situated within hospitals.

<sup>10</sup> The 54 installed cascades contained 9156 centrifuges; the 52 cascades declared by Iran as being fed with UF<sub>6</sub> on that date contained 8808 centrifuges. Not all of the centrifuges in the cascades that were being fed with UF<sub>6</sub> may have been working.

All the centrifuges installed are IR-1 machines. As of 19 February 2012, no centrifuges had been installed in the remaining five units, although preparatory installation work had been completed in two of the units, including the placement in position of 6177 empty IR-1 centrifuge casings, and was ongoing in the other three units. As of 19 February 2012, there had been no installation work in Production Hall B.

13. The results of a physical inventory verification (PIV) carried out by the Agency at FEP confirmed the inventory on 16 October 2011 as declared by Iran, within measurement uncertainties normally associated with such a facility. Therefore, there were no consequences for safeguards arising from the seal breakage in the feed and withdrawal area reported by the operator in April 2011.<sup>11</sup>

14. The Agency has confirmed that, as of 16 October 2011, 55 683 kg of natural UF<sub>6</sub> had been fed into the cascades since the start of operations in February 2007, and a total of 4871 kg of UF<sub>6</sub> enriched up to 5% U-235 had been produced. Iran has estimated that, between 17 October 2011 and 4 February 2012, it produced 580 kg of UF<sub>6</sub> enriched up to 5% U-235, which would result in a total production of 5451 kg of UF<sub>6</sub> enriched up to 5% U-235 since production began in February 2007. The nuclear material at FEP (including the feed, product and tails), as well as all installed cascades and the feed and withdrawal stations, are subject to Agency containment and surveillance.<sup>12</sup>

15. Based on the results of the analysis of environmental samples taken at FEP since February 2007<sup>13</sup> and other verification activities, the Agency has concluded that the facility has operated as declared by Iran in the relevant Design Information Questionnaire (DIQ).

16. **Pilot Fuel Enrichment Plant (PFEP):** PFEP is a research and development (R&D) facility, and a pilot low enriched uranium (LEU) production facility, which was first brought into operation in October 2003. It has a cascade hall that can accommodate six cascades, and is divided between an area designated for the production of LEU enriched up to 20% U-235 (Cascades 1 and 6) and an area designated for R&D (Cascades 2, 3, 4 and 5).

17. The results of a PIV carried out by the Agency at PFEP confirmed the inventory on 13 September 2011 as declared by Iran, within measurement uncertainties normally associated with such a facility. The results also show an improvement in the operator's measurement system, in particular in relation to the determination of the level of U-235 enrichment.<sup>14</sup>

18. **Production area:** Iran first began feeding low enriched UF<sub>6</sub> into Cascade 1 on 9 February 2010, for the stated purpose of producing UF<sub>6</sub> enriched up to 20% U-235 for use in the manufacture of fuel for the Tehran Research Reactor (TRR).<sup>15,16</sup> Since 13 July 2010, Iran has been feeding low enriched UF<sub>6</sub> into two interconnected cascades (Cascades 1 and 6), each of which consists of 164 IR-1 centrifuges.<sup>17</sup>

19. As previously reported,<sup>18</sup> the Agency has verified that, as of 13 September 2011, 720.8 kg of low enriched UF<sub>6</sub> had been fed into the cascades in the production area since the process began on 9 February 2010, and that a total of 73.7 kg of UF<sub>6</sub> enriched up to 20% U-235 had been produced. Iran has

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<sup>11</sup> GOV/2011/29, para. 10.

<sup>12</sup> In line with normal safeguards practice, small amounts of nuclear material at the facility (e.g. some waste and samples) are not subject to containment and surveillance.

<sup>13</sup> Results are available to the Agency for samples taken up to 14 August 2011.

<sup>14</sup> GOV/2011/29, para. 14; GOV/2011/54, para. 15; GOV/2011/65, para. 16.

<sup>15</sup> GOV/2010/28, para. 9.

<sup>16</sup> TRR is a 5 MW reactor which operates with 20% U-235 enriched fuel and is used for the irradiation of different types of targets and for research and training purposes.

<sup>17</sup> GOV/2010/28, para. 9.

<sup>18</sup> GOV/2011/65, para. 15.

estimated that, between 14 September 2011 and 11 February 2012, a total of 164.9 kg of UF<sub>6</sub> enriched at FEP was fed into the two interconnected cascades at PFEP and that approximately 21.7 kg of UF<sub>6</sub> enriched up to 20% U-235 were produced. This would result in a total production of 95.4 kg of UF<sub>6</sub> enriched up to 20% U-235 at PFEP since production began in February 2010.

20. **R&D area:** In the area designated for Cascades 2 and 3, Iran has been intermittently feeding natural UF<sub>6</sub> into single machines, 10-machine cascades and 20-machine cascades of IR-1, IR-2m and IR-4 centrifuges. In a letter dated 1 February 2012, Iran informed the Agency of its intention to install three new types of centrifuge – IR-5, IR-6 and IR-6s – as single machines in Cascade 2. As of 21 February 2012, Iran had installed 58 IR-4 centrifuges in Cascade 4, which has not been fed with UF<sub>6</sub>. Iran had also installed 164 IR-2m centrifuges in Cascade 5.<sup>19</sup> Between 9 and 12 August 2011<sup>20</sup> and from 5 November 2011 onwards,<sup>21</sup> Iran has been intermittently feeding natural UF<sub>6</sub> into Cascade 5.

21. Between 29 October 2011 and 11 February 2012, a total of approximately 164.4 kg of natural UF<sub>6</sub> was fed into centrifuges in the R&D area, but no LEU was withdrawn as the product and the tails are recombined at the end of the process.

22. Based on the results of the analysis of the environmental samples taken at PFEP<sup>22</sup> and other verification activities, the Agency has concluded that the facility has operated as declared by Iran in the relevant DIQ.

## **D.2. Fordow Fuel Enrichment Plant**

23. In September 2009, Iran informed the Agency that it was constructing the Fordow Fuel Enrichment Plant (FFEP), located near the city of Qom.

24. To date, Iran has provided the Agency with an initial DIQ and three revised DIQs:

- In October 2009, Iran stated that the purpose of the facility was the production of UF<sub>6</sub> enriched up to 5% U-235, and that the facility was being built to contain 16 cascades, equally divided between two units (Unit 1 and Unit 2), with a total of approximately 3000 centrifuges.<sup>23</sup>
- In September 2010, Iran stated that the purpose of FFEP was to carry out R&D in addition to the production of UF<sub>6</sub> enriched up to 5% U-235.
- In June 2011, Iran stated that the purpose of FFEP was the production of UF<sub>6</sub> enriched up to 20% U-235, as well as to carry out R&D.
- On 18 January 2012, Iran informed the Agency that the “R&D installation” was being removed from FFEP. In its updated DIQ of the same date, Iran declared that FFEP was designed to facilitate the production of UF<sub>6</sub> enriched up to 20% U-235 and the production of UF<sub>6</sub> enriched up to 5% U-235 in “both production units”. The DIQ indicated that provision had also been made to enable the operator to “use some of the cascades for production of 5% LEU while some of them are producing 20% LEU”.

25. On 14 December 2011, Iran began feeding UF<sub>6</sub> enriched up to 5% U-235 that it had previously transferred from FEP into one set of two interconnected cascades in Unit 2 at FFEP, containing

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<sup>19</sup> Iran had previously indicated its intention to install two 164-centrifuge cascades (Cascades 4 and 5) in the R&D area (GOV/2011/7, para. 17).

<sup>20</sup> At which time Cascade 5 contained 54 IR-2m centrifuges.

<sup>21</sup> At which time Cascade 5 contained 164 IR-2m centrifuges.

<sup>22</sup> Results are available to the Agency for samples taken up to 3 August 2011.

<sup>23</sup> GOV/2009/74, para. 9.

348 centrifuges.<sup>24,25</sup> Since the Director General's previous report, Iran has installed 348 centrifuges in a second set of two interconnected cascades in Unit 2 and, on 25 January 2012, began feeding it with UF<sub>6</sub> enriched up to 5% U-235. To date, all the centrifuges installed are IR-1 machines. Iran has estimated that, between 14 December 2011 and 17 February 2012, a total of 99.3 kg of UF<sub>6</sub> enriched up to 5% U-235 was fed into the two sets of interconnected cascades at FFEP and that approximately 13.8 kg of UF<sub>6</sub> enriched up to 20% U-235 were produced.

26. As of 15 February 2012, in the four remaining cascades of Unit 2 and in the eight cascades of Unit 1, 2088 empty IR-1 centrifuge casings had been placed in position and all of the piping had been installed. In a letter dated 16 February 2012, the Agency requested Iran to provide details on how it intends to operate FFEP (whether to produce UF<sub>6</sub> enriched up to 5% U-235, to produce UF<sub>6</sub> enriched up to 20% U-235, or to produce a combination of both).

27. The Agency has verified that FFEP is being constructed according to the latest DIQ provided by Iran. As previously reported, Iran provided some information in 2011 regarding the initial timing of, and circumstances relating to, its decision to build FFEP at an existing defence establishment.<sup>26</sup> Nevertheless, additional information from Iran is still needed in connection with this facility, particularly in relation to its original purpose, given the number of subsequent revisions to the DIQ for FFEP.<sup>27</sup>

### **D.3. Other Enrichment Related Activities**

28. The Agency is still awaiting a substantive response from Iran to Agency requests for further information in relation to announcements made by Iran concerning the construction of ten new uranium enrichment facilities, the sites for five of which, according to Iran, have been decided.<sup>28</sup> Iran has not provided information, as requested by the Agency in its letter of 18 August 2010, in connection with its announcement on 7 February 2010 that it possessed laser enrichment technology.<sup>29</sup> As a result of Iran's lack of cooperation on those issues, the Agency is unable to verify and report fully on these matters.

## **E. Reprocessing Activities**

29. Pursuant to the relevant resolutions of the Board of Governors and the Security Council, Iran is obliged to suspend its reprocessing activities, including R&D.<sup>30</sup> In a letter to the Agency dated 15 February 2008, Iran stated that it "does not have reprocessing activities". In that context, the Agency has continued to monitor the use of hot cells at TRR and the Molybdenum, Iodine and Xenon Radioisotope Production (MIX) Facility.<sup>31</sup> The Agency carried out an inspection and design information verification (DIV) at TRR on

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<sup>24</sup> GOV/2011/54, para. 23.

<sup>25</sup> In June 2011, Iran was reported to have announced a decision to "triple its (production) capacity", after which Iran would stop the "20% fuel production" at Natanz (Dr Fereydoon Abbasi, 'Iran to Triple Production of 20%-Enriched Uranium', Fars News Agency, 8 June 2011).

<sup>26</sup> GOV/2011/54, para. 26.

<sup>27</sup> GOV/2009/74, para. 14.

<sup>28</sup> 'Iran Specifies Location for 10 New Enrichment Sites', Fars News Agency, 16 August 2010.

<sup>29</sup> Cited on the website of the Presidency of the Islamic Republic of Iran, 7 February 2010, at <http://www.president.ir/en/?ArtID=20255>.

<sup>30</sup> S/RES/1696 (2006), para. 2; S/RES/1737 (2006), para. 2; S/RES/1747 (2007), para. 1; S/RES/1803 (2008), para. 1; S/RES/1835 (2008), para. 4; S/RES/1929 (2010), para. 2.

<sup>31</sup> The MIX Facility is a hot cell complex for the separation of radiopharmaceutical isotopes from targets, including uranium, irradiated at TRR. The MIX Facility is not currently processing any uranium targets.

12 February 2012, and a DIV at the MIX Facility on 13 February 2012. It is only with respect to TRR, the MIX Facility and the other facilities to which the Agency has access that the Agency can confirm that there are no ongoing reprocessing related activities in Iran.

## F. Heavy Water Related Projects

30. Contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran has not suspended work on all heavy water related projects, including the construction of the heavy water moderated research reactor, the Iran Nuclear Research Reactor (IR-40 Reactor), which is under Agency safeguards.<sup>32</sup>

31. On 14 February 2012, the Agency carried out a DIV at the IR-40 Reactor at Arak and observed that construction of the facility was ongoing and that one heavy water concentration column had been installed. According to Iran, the operation of the IR-40 Reactor is planned to commence in 2014.<sup>33</sup> In a letter dated 27 January 2012, the Agency, having not received any update of the DIQ for the IR-40 Reactor since January 2007, requested Iran to provide an updated DIQ.

32. Since its visit to the Heavy Water Production Plant (HWPP) on 17 August 2011, the Agency, in letters to Iran dated 20 October 2011 and 27 January 2012, requested further access to HWPP. The Agency has yet to receive a reply to those letters, and is again relying on satellite imagery to monitor the status of HWPP. Based on recent images, the HWPP appears to be in operation. To date, Iran has not provided the Agency with access to the heavy water stored at the Uranium Conversion Facility (UCF) in order to take samples.<sup>34</sup>

## G. Uranium Conversion and Fuel Fabrication

33. Although it is obliged to suspend all enrichment related activities and heavy water related projects, Iran is conducting a number of activities at UCF and the Fuel Manufacturing Plant (FMP) at Esfahan which, as described below, are in contravention of those obligations, although both facilities are under Agency safeguards.

34. **Uranium Conversion Facility:** On 17 December 2011, Iran started converting UF<sub>6</sub> enriched up to 20% U-235 into U<sub>3</sub>O<sub>8</sub>. As of 19 February 2012, the Agency had verified that 8 kg of uranium in the form of U<sub>3</sub>O<sub>8</sub> had been produced and that 7.3 kg of uranium in the form of U<sub>3</sub>O<sub>8</sub> had been subsequently transferred to FMP.

35. As previously reported, Iran started converting UF<sub>6</sub> enriched up to 3.34% U-235 into UO<sub>2</sub>.<sup>35</sup> As of 19 February 2012, the Agency verified that Iran had produced 24 kg of uranium in the form of UO<sub>2</sub> and that 13.6 kg of uranium in the form of UO<sub>2</sub> had been subsequently transferred to FMP.

36. On 19 February 2012, the Agency verified that Iran had produced about 896.5 kg of natural uranium in the form of UO<sub>2</sub>. The Agency has verified that Iran has transferred 144.3 kg of uranium in the form of UO<sub>2</sub> to FMP.

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<sup>32</sup> S/RES/1737 (2006), para. 2; S/RES/1747 (2007), para. 1; S/RES/1803 (2008), para. 1; S/RES/1835 (2008), para. 4; S/RES/1929 (2010), para. 2.

<sup>33</sup> 'Iran says Arak reactor to be launched in 2 years', Iranian Students News Agency, 18 February 2012.

<sup>34</sup> GOV/2010/10, paras 20 and 21.

<sup>35</sup> GOV/2011/65, para. 34.

37. **Fuel Manufacturing Plant:** Since the Director General's previous report, Iran has worked towards the production of two types of fuel assembly at FMP for use in TRR (see paragraph 48 below):

- *Assemblies made of fuel plates containing U<sub>3</sub>O<sub>8</sub>:* On 14 November and 19 November 2011, the Agency verified two fuel plates containing natural U<sub>3</sub>O<sub>8</sub> that had been produced at the R&D laboratory at FMP;<sup>36</sup> on 3 January 2012, the Agency verified a fuel plate containing U<sub>3</sub>O<sub>8</sub> enriched up to 20% U-235; and on 1 February 2012, the Agency verified a fuel assembly consisting of 14 fuel plates containing U<sub>3</sub>O<sub>8</sub> enriched up to 20% U-235.
- *Assemblies made of 12 fuel rods containing UO<sub>2</sub> enriched up to 3.34% U-235:* The Agency verified one fuel assembly on 26 November 2011 and another one on 22 December 2011.

All of the aforementioned fuel plates and fuel assemblies were subsequently transferred by Iran to TRR for irradiation testing.

38. In a letter dated 8 February 2012, Iran informed the Agency of its intention to "start pellet, fuel rod and fuel assembly production" on 12 February 2012 using natural UO<sub>2</sub>, in order to produce fuel for the IR-40 Reactor. During a DIV carried out on 18 February 2012, the Agency observed that the fabrication of pellets for the IR-40 Reactor had started.

39. In a letter to Iran dated 6 January 2012, the Agency pointed out that an appropriate safeguards approach relating to the U<sub>3</sub>O<sub>8</sub> fuel manufacturing line was not yet in place at FMP. However, notwithstanding the absence of the safeguards approach, it proved possible on this occasion, as confirmed during an inspection carried out at FMP on 18-19 February 2012, for the Agency to account for all of the nuclear material in the U<sub>3</sub>O<sub>8</sub> fuel manufacturing line. The Agency is now discussing with Iran a new safeguards approach for FMP.

## H. Possible Military Dimensions

40. Previous reports by the Director General have identified outstanding issues related to possible military dimensions to Iran's nuclear programme and actions required of Iran to resolve these.<sup>37</sup> Since 2002, the Agency has become increasingly concerned about the possible existence in Iran of undisclosed nuclear related activities involving military related organizations, including activities related to the development of a nuclear payload for a missile, about which the Agency has regularly received new information.

41. The Annex to the Director General's November 2011 report (GOV/2011/65) provided a detailed analysis of the information available to the Agency indicating that Iran has carried out activities that are relevant to the development of a nuclear explosive device. This information, which comes from a wide variety of independent sources, including from a number of Member States, from the Agency's own efforts and from information provided by Iran itself, is assessed by the Agency to be, overall, credible. The information indicates that: prior to the end of 2003 the activities took place under a structured programme; that some continued after 2003; and that some may still be ongoing.

42. In resolution 1929 (2010), the Security Council reaffirmed Iran's obligations to take the steps required by the Board of Governors in its resolutions GOV/2006/14 and GOV/2009/82, and to cooperate fully with the Agency on all outstanding issues, particularly those which give rise to concerns about the possible military dimensions to Iran's nuclear programme, including by providing access without delay to all sites,

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<sup>36</sup> GOV/2011/65, para. 37.

<sup>37</sup> GOV/2011/29, para. 35; GOV/2011/7, Attachment; GOV/2010/10, paras 40–45; GOV/2009/55, paras 18–25; GOV/2008/38, paras 14–21; GOV/2008/15, paras 14–25 and Annex; GOV/2008/4, paras 35–42; GOV/2011/65, paras 38–45 and Annex.



equipment, persons and documents requested by the Agency.<sup>38</sup> In its resolution GOV/2011/69 of 18 November 2011, the Board of Governors, inter alia, expressed its deep and increasing concern about the unresolved issues regarding the Iranian nuclear programme, including those which need to be clarified to exclude the existence of possible military dimensions.

## I. Design Information

43. The modified Code 3.1 of the Subsidiary Arrangements General Part to Iran's Safeguards Agreement provides for the submission to the Agency of design information for new facilities as soon as the decision to construct, or to authorize construction of, a new facility has been taken, whichever is the earlier. The modified Code 3.1 also provides for the submission of fuller design information as the design is developed early in the project definition, preliminary design, construction and commissioning phases. Iran remains the only State with significant nuclear activities and in which the Agency is implementing a comprehensive safeguards agreement, which is not implementing the provisions of the modified Code 3.1.<sup>39</sup> The Agency is still awaiting receipt from Iran of updated design information for the IR-40 Reactor, and further information pursuant to statements it has made concerning the planned construction of new uranium enrichment facilities and the design of a reactor similar to TRR.<sup>40</sup>

44. As reported previously, Iran's response to Agency requests for Iran to confirm or provide further information regarding its statements concerning its intention to construct new nuclear facilities is that it would provide the Agency with the required information in "due time" rather than as required by the modified Code 3.1 of the Subsidiary Arrangements General Part to its Safeguards Agreement.<sup>41</sup>

## J. Additional Protocol

45. Contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran is not implementing its Additional Protocol. The Agency will not be in a position to provide credible assurance about the absence of undeclared nuclear material and activities in Iran unless and until Iran provides the necessary cooperation with the Agency, including by implementing its Additional Protocol.<sup>42</sup>

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<sup>38</sup> S/RES/1929, paras 2 and 3.

<sup>39</sup> In accordance with Article 39 of Iran's Safeguards Agreement, agreed Subsidiary Arrangements cannot be changed unilaterally; nor is there a mechanism in the Safeguards Agreement for the suspension of provisions agreed to in the Subsidiary Arrangements. Therefore, as previously explained in the Director General's reports (see e.g. GOV/2007/22, 23 May 2007), the modified Code 3.1, as agreed to by Iran in 2003, remains in force. Iran is further bound by operative paragraph 5 of Security Council resolution 1929 (2010) to "comply fully and without qualification with its IAEA Safeguards Agreement, including through the application of modified Code 3.1".

<sup>40</sup> GOV/2010/46, para. 32.

<sup>41</sup> See para. 28 of this report and GOV/2011/29, para. 37.

<sup>42</sup> Iran's Additional Protocol was approved by the Board on 21 November 2003 and signed by Iran on 18 December 2003, although it has not been brought into force. Iran provisionally implemented its Additional Protocol between December 2003 and February 2006.

## **K. Other Matters**

46. As previously reported, in August 2011 the Agency carried out a PIV at the Jabr Ibn Hayan Multipurpose Research Laboratory (JHL) to verify, inter alia, nuclear material, in the form of natural uranium metal and process waste, related to conversion experiments carried out by Iran between 1995 and 2002.<sup>43,44</sup> The Agency's measurement of this material was 19.8 kg less than the operator's declaration of 270.7 kg. In a letter dated 2 November 2011, Iran provided additional information in relation to this discrepancy. In a letter dated 16 December 2011, the Agency informed Iran that, taking into account this additional information, the discrepancy remained, and that, therefore, further information was required of Iran. During discussions with Iran on 13 and 14 February 2012, the Agency requested access to records and personnel involved in the uranium metal conversion experiments. Iran indicated that it no longer possessed the relevant documentation and that the personnel involved were no longer available. Iran also indicated that the discrepancy may have been caused by there being a higher amount of uranium in the waste than had been measured by the Agency. In light of this, Iran has offered to process all of the waste material and to extract the uranium contained therein. The Agency has begun taking additional destructive analysis samples of material involved. The discrepancy remains to be clarified.

47. As previously reported, in a letter dated 19 June 2011, Iran informed the Agency of its intention to "transfer some of spent fuel assemblies (HEU [high enriched uranium] Control Fuel Element (CFE) and Standard Fuel Element (SFE)) from spent fuel pool (KMPE) to reactor core (KMPB) in order to conduct a research project". As of 12 February 2012, this activity had yet to begin.

48. Since the Director General's previous report, Iran has continued the irradiation at TRR of fuel rods and plates manufactured at FMP (referred to in paragraphs 37-39 above), including the irradiation of: one natural UO<sub>2</sub> fuel rod;<sup>45</sup> one of the fuel assemblies containing 12 rods of UO<sub>2</sub> enriched to 3.34% U-235 (subsequently used to replace one of the control assemblies in the reactor core of TRR); one of the natural uranium fuel plates containing U<sub>3</sub>O<sub>8</sub>; and one fuel plate enriched to less than 20% U-235. On 22 February 2012, the Agency verified that the fuel assembly consisting of 14 fuel plates containing U<sub>3</sub>O<sub>8</sub> enriched up to 20% U-235 was in the spent fuel bay of TRR.

49. On 10 January 2012, the Agency carried out an inspection at the Bushehr Nuclear Power Plant (BNPP), during which the Agency noted that the reactor was shut down. In a letter dated 6 February 2012, Iran provided the Agency with the commissioning schedule for BNPP, which indicated that commissioning activity had commenced on 31 January 2012.

## **L. Summary**

50. While the Agency continues to verify the non-diversion of declared nuclear material at the nuclear facilities and LOFs declared by Iran under its Safeguards Agreement, as Iran is not providing the necessary cooperation, including by not implementing its Additional Protocol, the Agency is unable to provide credible

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<sup>43</sup> This material had been under Agency seal since 2003.

<sup>44</sup> GOV/2003/75, paras 20–25 and Annex 1; GOV/2004/34, para. 32, and Annex, paras 10–12; GOV/2004/60, para. 33, Annex, paras 1–7; GOV/2011/65, para. 49.

<sup>45</sup> GOV/2011/54, para. 40.

assurance about the absence of undeclared nuclear material and activities in Iran, and therefore to conclude that all nuclear material in Iran is in peaceful activities.<sup>46</sup>

51. The Agency continues to have serious concerns regarding possible military dimensions to Iran's nuclear programme, as explained in GOV/2011/65. Iran did not provide access to Parchin, as requested by the Agency during its two recent visits to Tehran, and no agreement was reached with Iran on a structured approach to resolving all outstanding issues in connection with Iran's nuclear programme.

52. Since the Director General's November 2011 report (GOV/2011/65), contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran continues to carry out uranium enrichment activities and has: increased the number of cascades being used to produce UF<sub>6</sub> enriched to 5% U-235; increased the number of cascades being used to produce UF<sub>6</sub> enriched to 20% U-235; and is preparing additional cascades at Fordow (FFEP) and Natanz (FEP). Iran has also announced its intention to install three new types of centrifuge at Natanz (PFEP) for R&D purposes.

53. The Director General urges Iran, as required in the binding resolutions of the Board of Governors and mandatory Security Council resolutions, to take steps towards the full implementation of its Safeguards Agreement and its other obligations, including: implementation of the provisions of its Additional Protocol; implementation of the modified Code 3.1 of the Subsidiary Arrangements General Part to its Safeguards Agreement; suspension of enrichment related activities; and suspension of heavy water related activities.

54. The Director General calls upon Iran to cooperate fully with the Agency. The Director General urges Iran to work with the Agency to reach agreement on a structured approach, based on Agency verification practices, to resolve all outstanding issues. In particular, the Director General urges Iran to address the Agency's serious concerns about possible military dimensions to Iran's nuclear programme, including, as a first step, by responding to the Agency's questions related to Parchin and the foreign expert, and by granting early access in that regard.

55. The Director General will continue to report as appropriate.

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<sup>46</sup> The Board has confirmed on numerous occasions, since as early as 1992, that paragraph 2 of INFCIRC/153 (Corr.), which corresponds to Article 2 of Iran's Safeguards Agreement, authorizes and requires the Agency to seek to verify both the non-diversion of nuclear material from declared activities (i.e. correctness) and the absence of undeclared nuclear activities in the State (i.e. completeness) (see, for example, GOV/OR.864, para. 49).