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NPT Safeguards Agreement with the Islamic Republic of Iran

Report by the Director General

A. Introduction

1. This report of the Director General is on the implementation of the NPT Safeguards Agreement^{1,2} in the Islamic Republic of Iran (Iran). It also addresses the implementation of the Joint Statement³ agreed between the Director General and HE Mr Mohammad Eslami, the Vice-President of Iran and Head of the Atomic Energy Organization of Iran (AEOI) on 4 March 2023. It covers the period since the issuance of the Director General's previous report.⁴

B. Background

2. As a result of its evaluations, the Agency identified in 2019 a number of questions related to possible undeclared nuclear material and nuclear-related activities at four locations in Iran that had not been declared to the Agency and requested responses to these questions from Iran, pursuant to Article 69 of the

¹ 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.

² Iran's Additional Protocol (INFCIRC/214/Add.1) was approved by the Board of Governors on 21 November 2003 and signed by Iran on 18 December 2003. Iran implemented voluntarily the Additional Protocol between December 2003 and February 2006. On 16 January 2016, Iran began provisionally applying the Additional Protocol in accordance with Article 17(b) of the Additional Protocol. As of 23 February 2021, Iran stopped the implementation of its nuclear-related commitments under the Joint Comprehensive Plan of Action (JCPOA), including the Additional Protocol (see GOV/INF/2021/13).

³ GOV/2023/9, Annex.

⁴ GOV/2024/29.

NPT Safeguards Agreement and Article 4.d. of the Additional Protocol. The Agency also provided Iran with detailed information upon which the Agency had made its requests for clarification.⁵

3. In 2019 and 2020, the Agency conducted complementary accesses at three of the four undeclared locations in Iran⁶ – Turqzabad (2019), Varamin (2020) and ‘Marivan’ (2020) – and found uranium particles of anthropogenic origin at each of these three locations, for which it sought explanations from Iran. The Director General expressed his deep concern that nuclear material had been present at these undeclared locations.⁷

4. In January 2022, the Agency provided Iran with its technical assessment of the safeguards issue related to Lavisian-Shian and informed Iran that it regarded the issue to be no longer outstanding at that stage.⁸ The Agency’s assessment of the undeclared nuclear-related activities that were undertaken by Iran at Lavisian-Shian, however, remains unchanged.⁹

5. In the period leading up to the Board of Governors (Board) meeting in June 2022, the Agency continued to seek technically credible explanations from Iran in relation to the outstanding safeguards issues related to Turqzabad, Varamin and ‘Marivan’, but without success.¹⁰ In its resolution of 8 June 2022, the Board, inter alia, expressed its “profound concern that the safeguards issues related to these three undeclared locations remain outstanding due to insufficient substantive cooperation by Iran, despite numerous interactions with the Agency”.¹¹

6. Following the Director General’s report to the Board in November 2022 that there had still been no progress in clarifying and resolving the outstanding safeguards issues,¹² the Board, in its resolution of 17 November 2022, decided that it was:

“...essential and urgent in order to ensure verification of the non-diversion of nuclear material that Iran act to fulfil its legal obligations and, with a view to clarifying all outstanding safeguards issues, take the following actions without delay:

- (i) Provide technically credible explanations for the presence of uranium particles of anthropogenic origin at three undeclared locations in Iran;
- (ii) Inform the Agency of the current location(s) of the nuclear material and/or of the contaminated equipment;
- (iii) Provide all information, documentation, and answers the Agency requires for that purpose;

⁵ GOV/2020/15, paras 3 and 4; GOV/2020/30, paras 3 and 4.

⁶ The Agency conducted a complementary access (CA) at Lavisian-Shian in 2004. As the location had undergone extensive sanitization and levelling in 2003 and 2004, the Agency assessed in 2021 that there would be no verification value in conducting another CA at this location (GOV/2021/15, para. 11).

⁷ GOV/2021/52, paras 2 and 14.

⁸ GOV/2022/5, paras 6 and 7.

⁹ These activities involved the drilling and processing of natural uranium in the form of a metal disc in order to produce metallic flakes that were subsequently subjected to chemical processing on at least two occasions at this location. These activities and the nuclear material used therein were not declared by Iran to the Agency as required under the Safeguards Agreement (GOV/2022/5, para. 6 and GOV/2022/26, para. 7).

¹⁰ Agency evaluations related to each of these three locations were provided in GOV/2022/26, Section D.

¹¹ GOV/2022/34, operative para. 2.

¹² GOV/2022/63, para. 9.

(iv) Provide access to locations and material the Agency requires for that purpose, as well as for the taking of samples as deemed appropriate by the Agency.”¹³

7. In the reporting period March–June 2023, Iran provided a possible explanation for the presence of depleted uranium particles at ‘Marivan’. On this basis, while its assessment of the undeclared nuclear-related activities that were undertaken by Iran at ‘Marivan’ remains unchanged,¹⁴ the Agency regards the matter as no longer outstanding at this stage.¹⁵ Consequently, the outstanding safeguards issues for which the Agency is currently seeking clarifications from Iran relate to two undeclared locations in Iran.

8. Following the Director General’s report to the Board in June 2024 that Iran had yet to clarify and resolve outstanding safeguards issues,¹⁶ the Board, in its resolution of 5 June 2024,¹⁷ reaffirmed the decision it made in its November 2022 resolution that it was “essential and urgent in order to ensure verification of the non-diversion of nuclear material that Iran act to fulfil its legal obligations and, with a view to clarifying all outstanding safeguards issues, take the following actions without delay...”,¹⁸ as cited verbatim in paragraph 6 above. The Board also called upon Iran, inter alia, to “implement without delay the Joint Statement”,¹⁹ to “reverse its withdrawal of the designations of several experienced Agency inspectors”,²⁰ and to “implement the modified Code 3.1, which is a legal obligation for Iran”.²¹ The Board also considered that “a continued failure by Iran to provide the necessary, full and unambiguous cooperation with the Agency to resolve all outstanding issues, may necessitate the production, by the Director General, of a comprehensive and updated assessment on the possible presence or use of undeclared nuclear material in connection with past and present outstanding issues regarding Iran’s nuclear programme, based on the information available”.²²

C. Outstanding Safeguards Issues

C.1. Two undeclared locations

9. The Agency’s assessments of the outstanding safeguards issues related to two undeclared locations in Iran are as follows:

Varamin: The Agency assesses that Varamin was an undeclared pilot-scale plant used between 1999 and 2003 for the processing and milling of uranium ore and conversion into uranium oxide and, at laboratory scale, into UF₄ and UF₆.²³ This location underwent significant changes in 2004,

¹³ GOV/2022/70, para. 3.

¹⁴ The analysis of all safeguards-relevant information available to the Agency related to ‘Marivan’ is consistent with Iran having conducted explosive experiments with protective shielding in preparation for the use of neutron detectors (GOV/2022/26, para. 20).

¹⁵ GOV/2023/26, Section C.2.

¹⁶ GOV/2024/29, Section C.1.

¹⁷ GOV/2024/39.

¹⁸ GOV/2024/39, para. 6.

¹⁹ GOV/2024/39, para. 3.

²⁰ GOV/2024/39, para. 4.

²¹ GOV/2024/39, para. 5.

²² GOV/2024/39, para. 8.

²³ GOV/2022/26, para. 25.

including the demolition of most buildings.²⁴ The analytical results of environmental samples taken by the Agency at Varamin in August 2020 indicated the presence of anthropogenic uranium particles, consistent with uranium conversion activities, that require explanation by Iran. The Agency also assesses that there are indications, supported by the results of the environmental samples analysis, that containers removed from Varamin were eventually transferred to Turqzabad. However, the nuclear activities assessed by the Agency to have been carried out at Varamin do not explain the presence of the multiple types of isotopically altered particles found at Turqzabad.

Turqzabad: The Agency assesses that Turqzabad was involved in the storage of nuclear material and equipment.²⁵ From early November 2018 onwards, the Agency observed, through the analysis of commercially available satellite imagery, scraping and landscaping activities at the location. In February 2019, the Agency took environmental samples at Turqzabad, the analytical results of which indicated the presence of multiple natural uranium particles of anthropogenic origin, and isotopically altered particles, including low enriched uranium particles with a detectable presence of U-236, and particles of slightly depleted uranium that require explanation by Iran. The Agency concluded that the containers that were stored at Turqzabad had either contained nuclear material or equipment that had been heavily contaminated with nuclear material, or both. The Agency assesses that while some of the containers stored at Turqzabad were dismantled at the location, others were removed from the location intact in 2018 and moved to an unknown location.²⁶

10. As previously reported, with reference to the nuclear material particles identified at Varamin and Turqzabad, Iran stated in June 2023 that it had “exhausted all its efforts so as to discover the origin of such particles” and that “[t]here has not been any nuclear activity or storage in these locations”.²⁷ In August 2023, Iran informed the Agency that none of the containers had been transferred intact from Turqzabad; they were all dismantled at the location.²⁸ Iran also stated that it would provide this information to the Agency, as well as information related to the whereabouts of the dismantled containers, but it still has not done so.

11. In March 2024, Iran stated that “all Iran’s nuclear material and activities have been completely declared to the Agency”.²⁹ With respect to Varamin, Iran stated that there has “never been any undeclared location which is required to be declared under the CSA”.³⁰ With respect to Turqzabad, Iran stated that “[t]here has not been any nuclear activity or storage at this location”.³¹

C.2. Discrepancy in nuclear material balance

12. As previously reported,³² in March 2022, the Agency verified at the Uranium Conversion Facility (UCF) the dissolution of 302.7 kg of natural uranium, as declared by Iran, in the form of solid waste and

²⁴ GOV/2020/30, para. 4, second bullet.

²⁵ Statement by the Deputy Director General for Safeguards to the Board of Governors, 7 November 2019, GOV/OR.1532, para. 11.

²⁶ GOV/2022/26, para. 34.

²⁷ INFCIRC/1094, paras 3 and 4.

²⁸ GOV/2023/43, para. 23.

²⁹ Communication from the Permanent Mission of the Islamic Republic of Iran to the Agency, INFCIRC/1183, 7 March 2024, para. 28.

³⁰ INFCIRC/1183, 7 March 2024, para. 13.

³¹ INFCIRC/1183, 7 March 2024, para. 14.

³² GOV/2023/8, paras 47 and 48.

items of uranium metal transferred from the Jaber Ibn Hayan Multipurpose Laboratory (JHL). The Agency identified a discrepancy that needed to be addressed in the amount of nuclear material it had verified compared to the amount declared by Iran.

13. In February 2024, Iran provided the Agency with corrected nuclear material accounting reports.³³ On the basis of these reports, the Agency considered, at UCF, the discrepancy in the nuclear material balance to have been rectified.³⁴ However, the Agency informed Iran that the amount of uranium contained in the solid waste sent from JHL to UCF for dissolution was less than had been declared by Iran in 2003-2004.³⁵ In May 2024, the Agency informed Iran that the material balance of the uranium involved in uranium metal production experiments conducted at JHL in 1995-2000 included an amount of nuclear material unaccounted for, which cannot be explained by accountancy measurement errors.

14. In its letter of reply, dated 9 July 2024, Iran stated that the uranium metal had been under the Agency's "continuous C/S measures (seals) while being retained at JHL" and that "no activity has been performed on this material which may change its status".

15. In a letter dated 18 July 2024, the Agency explained to Iran that the material balance of the nuclear material involved in the uranium metal experiments conducted at JHL in 1995-2000 was approximative, based on the best available method at the time, and that the dissolution conducted at UCF that was verified by the Agency had enabled the Agency to accurately measure the amount of uranium contained in the nuclear solid waste for the first time. The Agency also indicated that it would continue to evaluate the results of the dissolution conducted at UCF and share its findings with Iran shortly.

16. In a letter dated 13 August 2024, the Agency shared with Iran the final results of its evaluation of the verification results related to the isotopic composition of the nuclear material involved in the uranium metal experiments conducted at JHL in 1995-2000. The Agency informed Iran that the amount of nuclear material unaccounted for, related to the mass balance of those experiments, was greater than had been previously communicated to Iran. The Agency indicated its readiness to discuss its findings in detail with Iran at a technical meeting to be held at the earliest opportunity.

C.3. Modified Code 3.1

17. 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 nuclear 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.³⁶ Iran remains the only State with significant nuclear activities in which the Agency is implementing a comprehensive safeguards agreement but which is not implementing the provisions of the modified Code 3.1.

³³ The corrected nuclear material accounting reports indicate that the amount of uranium contained in the solid waste, arising from undeclared conversion experiments conducted between 1995 and 2000, sent from JHL to UCF for dissolution, was less than had been declared by Iran in 2003-2004. GOV/2024/8, footnote 24.

³⁴ GOV/2024/8, para. 15.

³⁵ GOV/2024/8, para. 38.

³⁶ The initial Code 3.1 only required the submission of design information for a new facility "normally not later than 180 days before the facility is scheduled to receive nuclear material for the first time".

18. As previously reported, Iran has made a number of references to having decided the locations for new nuclear facilities, for which it has not provided the Agency with preliminary design information despite having been requested to do so.³⁷

19. Iran's position is that "implementation of modified code 3.1 is suspended"; "currently the implementation of the initial Code 3.1 is the legal obligation" for Iran "under the Subsidiary Arrangements (General Part) of the CSA"; and that "the relevant safeguards information for any new facilities... will be provided in due time".³⁸

20. The Director General has reminded Iran on many occasions that implementation of modified Code 3.1 is a legal obligation for Iran under the Subsidiary Arrangements to its NPT Safeguards Agreement. In a letter to Iran dated 20 February 2024, the Agency again reiterated that the Subsidiary Arrangements cannot be modified, or their implementation suspended, unilaterally by Iran. The Agency reminded Iran that Iran had accepted modified Code 3.1 in 2003 and that, according to Article 39 of Iran's Safeguards Agreement, the Subsidiary Arrangements can only be changed by agreement with the Agency. The Agency also indicated to Iran that the Joint Comprehensive Plan of Action (JCPOA) has no legal effect on Iran's obligations under its Safeguards Agreement and Subsidiary Arrangements thereto. Therefore, Iran's unilateral decision to stop implementation of modified Code 3.1 is contrary to its legal obligations set out in Article 39 of the Safeguards Agreement and in the Subsidiary Arrangements.

D. Joint Statement

D.1. Background

21. On 4 March 2023, as a result of discussions between the Director General and the Vice-President of Iran and Head of the Atomic Energy Organization of Iran (AEOI), Mohammad Eslami, the Agency and the AEOI agreed a Joint Statement³⁹ as follows:

- Interactions between the IAEA and Iran will be carried out in a spirit of collaboration, and in full conformity with the competences of the IAEA and the rights and obligations of the Islamic Republic of Iran, based on the comprehensive safeguards agreement.
- Regarding the outstanding safeguards issues related to the three locations,⁴⁰ Iran expressed its readiness to continue its cooperation and provide further information and access to address the outstanding safeguards issues.
- Iran, on a voluntary basis will allow the IAEA to implement further appropriate verification and monitoring activities. Modalities will be agreed between the two sides in the course of a technical meeting which will take place soon in Tehran.

³⁷ Information published on the AEOI website in June 2023 indicated that Iran has decided the locations for new power reactors and a new research reactor in Iran (GOV/2023/43, footnote 29). In November 2023, Vice-President Eslami made a statement referring to the excavation of the main building of the planned IR-360 reactor "in the coming days" and information available on the AEOI website referred to the "start of the executive operation of the construction of "Iran Hormoz" nuclear power plants by order of the president" (GOV/2024/8, para. 20).

³⁸ GOV/2024/8, para. 21.

³⁹ GOV/2023/9, Annex.

⁴⁰ See paragraph 7 of this report.

22. It should be noted that Iran's obligations under its NPT Safeguards Agreement, including those referred to in Section C, are not dependent on the implementation or otherwise of any voluntary activities in relation to the Joint Statement.

23. Limited progress was made towards implementing the Joint Statement in the reporting period March-June 2023.⁴¹

24. In technical discussions in the margins of the General Conference, the Agency proposed to Iran two voluntary measures as the next steps under the Joint Statement.⁴² However, Iran described the Agency's requests and proposed activities as "not acceptable", but made no alternative proposal.

25. As previously reported,⁴³ in September 2023, Iran informed the Agency of its decision to withdraw the designation of several experienced Agency inspectors designated for Iran. This followed a previous recent withdrawal of the designation of another experienced Agency inspector designated for Iran. This measure, while formally permitted by the NPT Safeguards Agreement, was exercised by Iran in a manner that directly and seriously affects the Agency's ability to conduct effectively its verification activities in Iran, in particular at the enrichment facilities. Despite the Director General's requests to Iran to reverse its decision to withdraw the designations for these inspectors, Iran has not done so.

26. On 6–7 May 2024, the Director General met Vice-President Eslami, the late HE Mr Amir Abdollahian, Foreign Minister of Iran, and HE Mr Ali Bagheri Kani, the then Political Deputy of the Foreign Minister of Iran, in Tehran and Esfahan with a view to facilitating the continued implementation of the Joint Statement that had effectively been frozen since May 2023. During these meetings, the Director General shared a series of concrete proposals related to each of the three elements of the Joint Statement with a view to making the Joint Statement operational. Iran agreed that the Joint Statement continues to provide a framework for cooperation with the Agency and for addressing the outstanding issues.

27. Technical discussions between senior officials of the Agency and Iran, scheduled for 20 May 2024, did not take place due to the "special circumstances" prevailing at that time and Iran suggested that discussions be continued in Tehran on a future date.

28. No further progress was made towards implementing the Joint Statement in the period June 2023 to June 2024.

D.2. Developments since previous report

29. In a letter dated 6 June 2024, Vice-President Eslami informed the Director General that "pursuant to careful and in depth consideration of request to reverse the withdrawal of designation of certain inspectors", Iran's position "with regard to the de-designation of those inspectors is unchanged and this position will remain as it is".

30. In a letter dated 8 August 2024, the Agency requested that Iran provide access to the centrifuge rotor and bellows manufacturing workshops in Esfahan to enable the Agency to service the cameras that had last been serviced on 21 May 2024. The Agency reminded Iran that such Agency equipment could not be left without being serviced for more than three months and, therefore, requested access to the cameras on 21 August 2024. As of the date of this report, Iran had not replied to the Agency.

⁴¹ GOV/2023/58, para. 24.

⁴² GOV/2023/58, para. 27.

⁴³ GOV/INF/2023/14, para. 1.

31. Prior to the elections in Iran, then acting Foreign Minister Bagheri Kani indicated to the Director General that further engagement with the Agency would be determined by the new government of Iran.

32. After the elections in Iran had been concluded, the Director General sent a congratulatory message to President Pezeshkian and indicated his disposition to travel to Tehran to meet with him to re-launch the dialogue and cooperation between the Agency and Iran. President Pezeshkian replied, confirming his agreement to meet with the Director General at the appropriate juncture.

33. No technical discussions between the Agency and Iran relating to the Joint Statement have taken place during this reporting period and, therefore, no further progress has been made towards its implementation.

E. Summary

34. The Director General reiterates that the outstanding safeguards issues stem from Iran's obligations under its NPT Safeguards Agreement and need to be resolved for the Agency to be in a position to provide assurance that Iran's nuclear programme is exclusively peaceful.

35. In order to resolve these issues, Iran needs to provide technically credible explanations for the presence of uranium particles of anthropogenic origin at Varamin and Turqzabad and inform the Agency of the current location(s) of the nuclear material and/or of the contaminated equipment involved. Instead, Iran has stated that it has declared all of the nuclear material, activities and locations required under its Safeguards Agreement. This is inconsistent with the Agency's findings of uranium particles of anthropogenic origin at these undeclared locations in Iran.

36. The Director General regrets that the outstanding safeguards issues remain unresolved 21 months after the Board of Governors decided that it was "essential and urgent in order to ensure verification of the non-diversion of nuclear material" for Iran to clarify those outstanding safeguards issues.

37. The Director General has repeatedly made clear over a number of years that unless and until Iran resolves the outstanding safeguards issues, the Agency will not be able to confirm the correctness and completeness of Iran's declarations under its NPT Safeguards Agreement.

38. Notwithstanding Iran's statements, the Agency's assessments of the undeclared nuclear-related activities that took place at the four undeclared locations in Iran referred to above (paragraphs 3 and 4), and of the origin of the uranium particles of anthropogenic origin found at three of these locations, remain unchanged.

39. Iran is still not implementing modified Code 3.1, having stated that such implementation is suspended.

40. The Director General deeply regrets that Iran has not reversed its decision to withdraw the designations of several experienced Agency inspectors. This remains essential to fully allow the Agency to conduct its verification activities in Iran effectively.

41. There has been no progress in the past 15 months towards implementing the Joint Statement of 4 March 2023. In the context of Iran's agreement that the Joint Statement continues to provide a framework for cooperation with the Agency and for addressing the outstanding safeguards issues, the Director General calls upon Iran to implement the Joint Statement through serious engagement with the Agency's concrete proposals.

42. The Director General expresses the hope that his initial exchange with President Pezeshkian will be followed by an early visit to Iran and the establishment of a fluid, constructive dialogue that swiftly leads to concrete results.

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