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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.

B. Background

2. The comprehensive evaluation of all safeguards-relevant information available to the Agency is essential in ascertaining that there are no indications of the diversion of declared nuclear material from peaceful nuclear activities, no indications of undeclared production or processing of nuclear material at declared facilities and locations outside facilities (LOFs), and no indications of undeclared nuclear

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 JCPOA, including the Additional Protocol (see GOV/INF/2021/13).

³ GOV/2023/9, Annex.

material and activities in a State with a comprehensive safeguards agreement (NPT Safeguards Agreement).⁴

- 3. 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 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
- 4. In 2019 and 2020, the Agency conducted complementary accesses at three of the four undeclared locations in Iran Turquzabad (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.⁶
- 5. In January 2022, the Agency provided Iran with its technical assessment of the safeguards issue related to Lavisan-Shian and informed Iran that it regarded the issue to be no longer outstanding at that stage. The Agency's assessment of the undeclared nuclear-related activities that were undertaken by Iran at Lavisan-Shian, however, remains unchanged.
- 6. By the Board of Governors (Board) meeting in June 2022, the Agency was still seeking explanations from Iran in relation to the safeguards issues related to Turquzabad, Varamin and 'Marivan'. 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".
- 7. 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, 11 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;

⁴ GOV/2020/15, para. 2, GOV/2023/25, para.17.

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

⁶ GOV/2021/52, paras 2 and 14.

⁷ GOV/2022/5, paras 6 and 7.

⁸ 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).

⁹ Agency evaluations related to each of these three locations were provided in GOV/2022/26, Section D.

¹⁰ GOV/2022/34, operative para. 2.

¹¹ GOV/2022/63, para. 9.

- (iii) Provide all information, documentation, and answers the Agency requires for that purpose;
- (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."¹²

The Board also noted that "the provision by Iran of this information and access and the subsequent verification by the IAEA pursuant to Iran's NPT Safeguards Agreement is essential for the Secretariat to be in position to report the issues as no longer outstanding and thereby remove the need for the Board's consideration and action on these issues".

8. 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, ¹³ the Agency regards the matter as no longer outstanding at this stage. ¹⁴ Consequently, the outstanding safeguards issues for which the Agency is currently seeking clarifications from Iran relate to two undeclared locations in Iran.

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. This location underwent significant changes in 2004, including the demolition of most buildings. 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 Turquzabad. 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 Turquzabad.

Turquzabad: The Agency assesses that Turquzabad was involved in the storage of nuclear material and equipment.¹⁷ 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 Turquzabad, the analytical

¹² GOV/2022/70, para. 3.

¹³ 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).

¹⁴ GOV/2023/26, Section C.2.

¹⁵ GOV/2022/26, para. 25.

¹⁶ GOV/2020/30, para. 4, second bullet.

¹⁷ Statement by the Deputy Director General for Safeguards to the Board of Governors, 7 November 2019, GOV/OR.1532, para. 11.

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 Turquzabad 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 Turquzabad were dismantled at the location, others were removed from the location intact in 2018 and moved to an unknown location.¹⁸

- 10. As previously reported, with reference to the nuclear material particles identified at Varamin and Turquzabad, 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". In August 2023, Iran informed the Agency that none of the containers had been transferred intact from Turquzabad; they were all dismantled at the location. Iran also stated that it would provide this information to the Agency, as well as information related to the whereabouts of the dismantled containers.
- 11. However, during this reporting period, Iran has once again not provided the Agency with any information on the outstanding safeguards issues relevant to either of the two undeclared locations.

C.2. Discrepancy in nuclear material balance

- 12. As previously reported,²¹ 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 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. Iran confirmed the existence of a discrepancy (shortfall) and agreed to work with the Agency to address it.
- 13. As also previously reported,²² in April 2023, Iran provided to the Agency revised nuclear material accountancy reports for UCF. The Agency assessed that these reports had not addressed the discrepancy and, therefore, requested Iran to correct them. During technical discussions between the Agency and Iran in Vienna in November 2023, Iran provided to the Agency updated information regarding the discrepancy.²³
- 14. During technical discussions between the Agency and Iran in Tehran on 29 January 2024, the Agency provided its assessment of the aforementioned updated information and the results of further verification activities it had recently conducted at UCF. Following discussions, Iran agreed to the Agency's request to correct the nuclear material accounting records and reports.
- 15. In a letter dated 7 February 2024, Iran provided to the Agency the required corrected nuclear material accounting reports.²⁴ On the basis of these reports, the Agency considers, at UCF, the discrepancy in the nuclear material balance to have been rectified.

¹⁸ GOV/2022/26, para. 34.

 $^{^{\}rm 19}$ INFCIRC/1094, paras 3 and 4.

²⁰ GOV/2023/43, para. 23.

²¹ GOV/2023/8, paras 47 and 48.

²² GOV/2023/26, para. 14.

²³ GOV/2023/58, para. 16.

²⁴ 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 2002, sent from JHL to UCF for dissolution, was less than had been declared by Iran in 2003-2004.

C.3. Modified Code 3.1

- 16. 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. 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.
- 17. 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 which, in accordance with Article 39 of that Agreement, cannot be modified unilaterally and that there is no mechanism in the Agreement for the suspension of implementation of provisions agreed to in the Subsidiary Arrangements.
- 18. As previously reported, Iran has made reference 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.²⁵
- 19. On 1 November 2023, Iran informed the Agency that "... implementation of modified code 3.1 is suspended. Therefore, currently the implementation of the initial Code 3.1 is the legal obligation for the Islamic Republic of Iran under the Subsidiary Arrangements (General Part) to the CSA, and it should be noted that design information for any new facilities... will be provided in due time".
- 20. 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". The Agency observed, through the analysis of commercially available satellite imagery, excavations of the reactor site in early December 2023. In light of these developments, the Agency, in a letter dated 5 February 2024, requested of Iran updated design information for the planned IR-360 reactor in accordance with modified Code 3.1 of the Subsidiary Arrangements. In a separate letter of the same date, the Agency also requested that Iran provide the Agency with preliminary design information, in accordance with modified Code 3.1 of the Subsidiary Arrangements, for the "Iran Hormoz" nuclear power plants. This request was in light of the information available on the AEOI website referring to the "start of the executive operation of the construction of "Iran Hormoz" nuclear power plants by order of the president", and the Agency's observation, through the analysis of commercially available satellite imagery, of work having started at the site.
- 21. In its reply, dated 7 February 2024, Iran repeated its position 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".
- 22. 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 informed Iran that the Joint Comprehensive Plan of Action (JCPOA) has no legal effect

²⁵ 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).

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.

23. Iran continues not to implement modified Code 3.1.

D. Joint Statement

D.1. Background

- 24. 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 Statement²⁶ 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, 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.
- 25. 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.
- 26. Limited progress was made towards implementing the Joint Statement in the reporting period March-June 2023, including Iran allowing the Agency to install monitoring equipment at two declared enrichment facilities and to install surveillance cameras at workshops in Esfahan where centrifuge rotor tubes and bellows are manufactured, although without providing access to the data recorded by those cameras.²⁷ In response to the Agency's request to access this data, Iran stated that they "currently are not subjected to the Joint Statement".²⁸ No further progress was made in the following reporting period June-September 2023.²⁹
- 27. At a meeting with the Director General on 25 September 2023, Vice-President Eslami indicated that he expected there would be no significant progress towards implementing the Joint Statement, particularly with regard to JCPOA nuclear-related commitments, while sanctions remained in place. The Director General reminded Vice-President Eslami that the Joint Statement had been agreed to by both parties and that Iran should implement it in good faith.

²⁷ GOV/2023/58, para. 24.

²⁶ GOV/2023/9, Annex.

²⁸ INFCIRC/1094, para. 9.

²⁹ GOV/2023/26, para. 26.

- 28. 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.³⁰ The Agency also requested Iran to provide the additional information concerning the containers at Turquzabad, to which it had referred in August 2023. However, Iran did not provide the information during the discussions, or subsequently. Iran described the Agency's requests and proposed activities as "not acceptable", but made no alternative proposal.
- 29. As previously reported,³¹ 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. Moreover, the Director General regarded the linking by Iran of statements by IAEA Member States to the withdrawal by Iran of designations of Agency inspectors with the same nationality as extreme and unjustified: it effectively makes the independent technical work of the Agency subject to political interpretation of other Member States' views about Iran's nuclear activities.
- 30. In late October 2023, the Director General requested Vice-President Eslami to reconsider the withdrawal of the designations for these inspectors. In response, Vice-President Eslami reiterated Iran's position that it was within its rights to de-designate the Agency inspectors but stated that he was "exploring possibilities to address" the Director General's request.
- 31. In summary, no progress was made towards implementing the Joint Statement in the reporting period September-November 2023.

D.2. Developments since previous report

- 32. On 30 December 2023, Iran allowed Agency inspectors to service the cameras at the workshops in Esfahan, but without providing access to the data recorded by those cameras. The data collected by the cameras since early September were placed under separate Agency seals and Iranian seals at the location.³²
- 33. During this reporting period, despite the Director General's request, Iran has not reconsidered its decision to withdraw the designations for any of the aforementioned inspectors previously designated for Iran.
- 34. During the aforementioned technical discussions between the Agency and Iran in Tehran on 29 January 2024, senior Agency officials repeated the request for Iran to provide to the Agency the additional information concerning the containers at Turquzabad, to which Iran had referred in August 2023 and which it had said it would provide. To date, the Agency has not received any such information.
- 35. In summary, no progress was made towards implementing the Joint Statement in the reporting period November 2023-March 2024.

³⁰ GOV/2023/58, para. 27.

³¹ GOV/INF/2023/14, para. 1.

³² GOV/INF/2024/1, para. 8.

E. Summary

- 36. 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.
- 37. In that context, the Director General regrets that once again there has been no progress in resolving the outstanding safeguards issues in this reporting period. Iran still has not:
 - provided the Agency with technically credible explanations for the presence of uranium particles of anthropogenic origin at Varamin and Turquzabad and informed the Agency of the current location(s) of related nuclear material and/or of contaminated equipment; or
 - implemented modified Code 3.1.
- 38. The Director General notes the corrected nuclear material accounting reports provided by Iran regarding the discrepancy in the nuclear material balance at UCF. He also notes that this indicates 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 2003-2004.³³ This new element requires further consideration by the Agency.
- 39. Despite numerous resolutions of the Board and many opportunities provided by the Director General over a number of years, Iran has neither provided the Agency with technically credible explanations for the presence of uranium particles of anthropogenic origin at two undeclared locations in Iran nor informed the Agency of the current location(s) of nuclear material and/or of contaminated equipment. In the absence of any technically credible explanations from Iran, the Agency has not changed its assessment either of the undeclared nuclear-related activities at the four locations referred to in paragraph 3 above or of the origin of the uranium particles of anthropogenic origin found at three of these four undeclared locations in Iran.
- 40. The Director General reiterates that unless and until Iran provides technically credible explanations for the presence of uranium particles at undeclared locations in Iran and informs the Agency of the current location(s) of the nuclear material and/or of the contaminated equipment, the Agency will not be able to confirm the correctness and completeness of Iran's declarations under its NPT Safeguards Agreement.
- 41. It is five years since uranium particles of anthropogenic origin were found at Turquzabad and three and a half years since similar particles were also found at Varamin. In its resolution of November 2022, the Board of Governors decided that it was "essential and urgent in order to ensure verification of the non-diversion of nuclear material" that Iran clarify all outstanding safeguards issues. Since that resolution, no progress has been made in resolving these outstanding safeguards issues.
- 42. The Director General continues to strongly condemn Iran's sudden withdrawal of the designations of several experienced Agency inspectors, regards Iran's stance as not only unprecedented but unambiguously contrary to the cooperation that is required and expected in order to facilitate the effective implementation of its NPT Safeguards Agreement, and notes that Iran's actions are in contradiction of the "spirit of cooperation" agreed in the Joint Statement. The Director General deeply regrets that Iran has yet to reverse its decision to withdraw the designations for these inspectors. This is essential to fully allow the Agency to conduct its verification activities in Iran effectively.

³³ The Agency carried out a physical inventory verification (PIV) at JHL in August 2011 to verify, inter alia, the nuclear material, in the form of natural uranium metal, and process waste related to experiments to convert UF₄ into uranium metal that had been conducted at IHL in the period 1995-2002. As a result of the PIV, the Agency identified a possible discrepancy of several

conducted at JHL in the period 1995-2002. As a result of the PIV, the Agency identified a possible discrepancy of several kilogrammes of natural uranium in the accountancy records of these experiments (see GOV/2015/68, para. 31).

- 43. Following limited progress towards implementing the Joint Statement of 4 March 2023 in the reporting period March-June 2023, no further progress has been made since. The Director General is seriously concerned that Iran has unilaterally stopped implementing the Joint Statement and questions Iran's continued commitment to its implementation.
- 44. Public statements made in Iran regarding its technical capabilities to produce nuclear weapons only increase the Director General's concerns about the correctness and completeness of Iran's safeguards declarations. The Director General reiterates that only through constructive and meaningful engagement can these concerns be addressed and once again calls upon Iran to cooperate fully and unambiguously with the Agency.
- 45. The Director General will continue to report as appropriate.