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(GOV/2021/43)

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 Agreement¹ and the Additional Protocol² in the Islamic Republic of Iran (Iran). It describes the Agency's efforts and interactions with Iran to clarify information relating to the correctness and completeness of Iran's declarations under its Safeguards Agreement and Additional Protocol.

B. Previous developments

2. In his previous report to the Board of Governors, the Director General provided a summary of the Agency's findings in relation to four undeclared locations in Iran (identified as Locations 1, 2, 3 and 4), and Iran's responses to the Agency's requests for clarification.³ The Director General reiterated his deep concern that the Agency had found indications that nuclear material had been present at three of these

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/2021/29.

locations, that Iran had yet to provide the necessary explanation for the presence of such nuclear material at those locations, and that the current location(s) of the nuclear material were not known to the Agency. Nor had Iran answered the Agency's questions with regard to another undeclared location or clarified the current location of natural uranium in the form of a metal disc. The Director General reiterated the requirement for Iran to clarify and resolve these issues without further delay by providing information, documentation and answers to the Agency's questions and stated that the lack of progress in clarifying the Agency's questions concerning the correctness and completeness of Iran's safeguards declarations was seriously affecting the ability of the Agency to provide assurance of the peaceful nature of Iran's nuclear programme.⁴

3. As previously reported,⁵ the Director General has reminded Iran that implementation of modified Code 3.1 is a legal obligation for Iran under the Subsidiary Arrangements to its Safeguards Agreement which, in accordance with Article 39 of Iran's Safeguards Agreement, cannot be modified unilaterally and that there is no mechanism in the Safeguards Agreement for the suspension of implementation of provisions agreed to in the Subsidiary Arrangements. As of 23 February 2021, Iran had informed the Agency that it stopped the implementation of modified Code 3.1 of the Subsidiary Arrangements to Iran's Safeguards Agreement.⁶ Subsequently, Iran informed the Agency that it does not have a plan to construct a new nuclear facility in the near future and also informed the Agency of its readiness to work with the Agency to find a mutually acceptable solution to address the issue.⁷

C. Recent developments

4. The Director General, in a letter to Iran dated 17 June 2021, stated that it was indispensable to continue discussions between Iran and the Agency in order to come to a technical conclusion on the safeguards issues with regard to the four locations, which, so far, the Agency had not been in a position to do. He indicated that in order to arrive at concrete results without further delay, Iran had to provide substantive answers to the Agency's questions, together with supporting information, which could then be analysed by the Agency to establish whether they provided credible explanations. The Director General also sought to finalise the date for the next meeting of Iranian and Agency officials in Tehran. The Director General did not receive a reply from Iran.

5. At a meeting in Vienna on 26 June 2021 to discuss arrangements for future technical discussions, Iran proposed that the Agency conduct additional verification activities at a declared facility in Iran in order to close the issue relating to Location 2. However, Iran's proposal was contingent on the Agency agreeing to close the issue relating to Location 2 regardless of the outcome of the additional verification activities. The Agency could not accept such a condition. In any event, conducting additional verification activities at this declared facility alone cannot close the issue relating to Location 2 as Iran has not provided any substantive answers to the Agency's related questions nor clarified the current location of natural uranium in the form of a metal disc.

6. The Agency, in a letter to Iran dated 9 July 2021, expressed regret that the Agency and Iran had not held further technical discussions since the meeting in Vienna on 26 May 2021, and that the Agency had yet to receive supporting documents from Iran to substantiate the information provided by Iran

⁴ GOV/2021/29, paras 27 and 28.

⁵ GOV/2021/15, para. 19.

⁶ GOV/INF/2021/13, para. 2.

⁷ GOV/2021/29, para. 25.

relating to Location 4 during that meeting. The Agency also stated that it was regrettable that it had not received from Iran answers to the other questions related to the four locations. The Agency requested that Iran propose a venue and date for the next meeting as soon as possible, in order to reach a satisfactory technical conclusion on the issues.

7. In a letter dated 24 August 2021, Iran provided information in response to the questions that the Agency had presented to Iran during the technical discussions on 26 May 2021 concerning Iran's written statement on Location 4.⁸ In the same letter, Iran also provided information aimed at substantiating that written statement. The information provided by Iran included a reference to activities conducted at Location 4 in the past by an organization from another Member State. In the same letter, Iran also stated that "considering several meetings and communications on this matter and clarifications provided to the Agency... the IAEA is highly expected to announce that the issue is resolved and no further action is required".

8. In its reply dated 27 August 2021, the Agency informed Iran that it would analyse the information provided by Iran in its letter of 24 August 2021, together with other safeguards relevant information available to the Agency. The Agency explained that, according to its standard safeguards practice, any information provided to the Agency by a State pursuant to its safeguards agreement is verified by the Agency, including by assessing its consistency with other safeguards relevant information available to the Agency. As the information and supporting documentation provided by Iran also referred to activities conducted in Iran by an organization from another Member State, the Agency informed Iran that the Agency would approach that Member State to seek clarification and confirmation of such activities. The Agency also reminded Iran that the analysis of the samples taken by the Agency at Location 4 on 27 August 2020 showed the presence of anthropogenic uranium particles for which Iran had yet to provide an explanation. In light of the above, the Agency informed Iran that it was not in a position to resolve this safeguards issue at this stage.

9. In a letter to Iran dated 2 September 2021, the Agency further informed Iran that it had conducted a preliminary assessment of the information which Iran provided on 24 August 2021. The Agency assesses that part of the information provided by Iran is inconsistent with other safeguards relevant information available to the Agency, including commercial satellite imagery (see Section D.4 below). The Agency provided Iran with technical details of some of these inconsistencies and asked Iran for an explanation. The Agency also noted that Iran has yet to provide an explanation for the presence of anthropogenic uranium particles and to answer the Agency's original questions to Iran dating from August 2019.⁹

D. Current Situation

10. This section summarizes the Agency's findings in relation to the four undeclared locations in Iran and Iran's responses to the Agency's requests for clarification, as of the date of issuance of this report.

D.1. Location 1

11. According to information available to the Agency in September 2018, a location in Iran not declared to the Agency (Location 1) had allegedly been involved in the storage of nuclear material and

⁸ GOV/2021/29, para. 18.

⁹ GOV/2021/29, para. 11.

equipment.¹⁰ From early November 2018 onwards, the Agency observed, through the analysis of commercial satellite imagery, scraping and landscaping activities at the location.

12. In February 2019, the Agency conducted a complementary access and took environmental samples at Location 1. The Agency detected the presence of multiple natural uranium particles of anthropogenic origin, the composition of which indicated that they might have been produced through uranium conversion activities.¹¹ The analytical results of the environmental samples taken at this location indicated the presence of isotopically altered particles,¹² including low enriched uranium particles with a detectable presence of U-236, and slightly depleted uranium particles.¹³ The Agency, pursuant to Iran's Safeguards Agreement and Additional Protocol, requested Iran to provide clarifications and information, and to answer questions related to the Agency's findings regarding the presence of these particles.¹⁴ The Agency assessed the explanations provided by Iran for the presence of these particles to be not technically credible.¹⁵

13. The Agency assesses that there are indications, supported by the results of the environmental samples analysis, that containers that had been stored at this location had contained nuclear material and/or equipment that had been heavily contaminated by nuclear material. The Agency also assesses that while some of the containers stored at Location 1 were dismantled, others were removed from the location intact in 2018 and moved to an unknown location. Iran has provided no further information on, or relevant to, Location 1 since October 2020.¹⁶

D.2. Location 2

14. The Agency found indications at another location not declared by Iran (Location 2) of the possible presence in Iran between 2002 and 2003 of natural uranium in the form of a metal disc, with indications of it having undergone drilling and processing, which may not have been included in Iran's declarations.¹⁷ The Agency identified a number of questions related to this possible undeclared nuclear material and nuclear-related activities, including the origin of this disc and where such nuclear material was currently located. As Location 2 had undergone extensive sanitization and levelling in 2003 and 2004,¹⁸ the Agency assessed that there would be no verification value in conducting a complementary access at this location. In July and August 2019, the Agency requested responses to these questions from Iran, pursuant to its Safeguards Agreement and Additional Protocol, but received no response.¹⁹

15. In September 2020, as part of its efforts to clarify the safeguards issues related to Location 2, the Agency also conducted additional verification activities under the Safeguards Agreement at a declared

¹⁰ Statement by the Deputy Director General for Safeguards to the Board of Governors, 7 November 2019, GOV/OR.1532, para. 11.

¹¹ GOV/2019/55, para. 29.

¹² These particles had been identified as a result of the Agency's further analysis of the samples it took in February 2019, which was conveyed to Iran for the first time in an Agency letter to Iran, dated 2 September 2020 (see GOV/2020/51, para. 33, footnote 52).

¹³ GOV/2020/51, para. 33, footnote 53. The Agency noted in its letter to Iran dated 2 September 2020 that the compositions of these isotopically altered particles were similar to particles found in Iran in the past, originating from imported centrifuge components (see GOV/2008/4, para.11).

¹⁴ GOV/2020/51, para. 33.

¹⁵ GOV/2021/15, paras 6–8.

¹⁶ GOV/2020/51, para. 34.

¹⁷ GOV/2020/30, para. 4, first bullet.

¹⁸ GOV/2004/60, para. 6.

¹⁹ GOV/2020/30, paras 3 and 5; GOV/2021/29, paras 6 and 24.

facility in Iran where uranium metal had been produced previously. The purpose of these additional verification activities was to verify whether the natural uranium in the form of a metal disc that may have been used at Location 2 was present at this declared facility.²⁰ However, the result of these verification activities was inconclusive.²¹

16. Iran has not responded to the Agency's questions of July and August 2019 related to the possible presence of undeclared nuclear material and nuclear-related activities at Location 2, including the origin of a uranium metal disc and where such nuclear material is currently located.

D.3. Location 3

17. The Agency found indications at another location not declared by Iran (Location 3) of the possible use and storage of nuclear material and/or conduct of nuclear-related activities, including research and development activities related to the nuclear fuel cycle.²² This location may have been used for the processing and conversion of uranium ore, including fluorination, in 2003. This location also underwent significant changes in 2004, including the demolition of most buildings, as well as the removal of containers.

18. The Agency identified a number of questions related to this possible undeclared nuclear material and nuclear-related activities. In August 2019, the Agency requested responses from Iran, pursuant to its Safeguards Agreement and Additional Protocol. Iran provided no answers.²³ In January 2020, the Agency sought complementary access to the location to carry out location-specific environmental sampling.

19. Iran initially denied the Agency access to Location 3.²⁴ Following an agreement between the Agency and Iran in August 2020, however, the Agency conducted a complementary access at the location and took environmental samples. The analytical results of the environmental samples taken at this location indicated the presence of anthropogenic uranium particles that required explanation by Iran. In January 2021, the Agency conveyed to Iran the results of the analysis of these samples and related Agency questions.²⁵

20. The Agency assesses that there are indications, supported by the results of the environmental samples analysis, that containers removed from Location 3 were subsequently also present at Location 1. However, the results of the environmental sample analysis from Location 3, which were conveyed to Iran, would not explain all of the particles identified by the analytical results of the environmental samples taken at Location 1.

D.4. Location 4

21. Another location not declared to the Agency (Location 4) consists of two proximate areas where the Agency found indications that Iran had, in 2003, planned to use and store nuclear material. In one area, where outdoor testing of conventional explosive systems may have taken place, the Agency found indications relating to the testing of shielding in preparation for the use of neutron detectors in that same

²⁰ GOV/2020/30, para. 4, footnote 9.

²¹ GOV/2021/15, para. 16.

²² GOV/2020/30, para. 4, second bullet.

²³ GOV/2020/30, paras 3 and 5.

²⁴ GOV/2020/30, para. 5.

²⁵ GOV/2021/15, para. 17.

area.²⁶ In the second area of Location 4, from July 2019 onwards, the Agency observed via commercial satellite imagery, activities consistent with efforts to sanitize the area, including the demolition of buildings.²⁷

22. In August 2019, the Agency asked Iran a number of questions related to this possible undeclared nuclear material and nuclear-related activities and requested responses from Iran, pursuant to its Safeguards Agreement and Additional Protocol. Iran provided no answers. In January 2020, the Agency sought complementary access to the location to carry out location-specific environmental sampling.²⁸

23. Iran initially denied the Agency access to Location 4.²⁹ Following an agreement between the Agency and Iran in August 2020, however, the Agency conducted a complementary access at the location and took environmental samples. The analytical results of the environmental samples taken at this location indicated the presence of anthropogenic uranium particles that required explanation by Iran. In January 2021, the Agency conveyed to Iran the results of the analysis of these samples and related Agency questions.³⁰

24. As mentioned above (paragraph 7), on 24 August 2021, Iran provided information in response to the Agency's questions concerning Iran's written statement on the historic use of Location 4, as well as information aimed at substantiating that written statement. The Agency's initial assessment of the information provided by Iran on 24 August 2021, which was conveyed to Iran on 2 September 2021, is that there are inconsistencies between that information and the other safeguards-relevant information available to the Agency. In particular, Iran's statement that "[t]here was no activity at this location [second area] between 1994 and 2018" is inconsistent with the information available to the Agency, including satellite imagery of the location. Moreover, the Agency's original questions relating to this location remain unanswered. Iran has yet to provide, inter alia, explanations for the presence of anthropogenic uranium particles, and the source of the neutrons that the neutron detectors were to measure.

E. Summary

25. Iran's decision not to implement modified Code 3.1 is contrary to its legal obligations under the Subsidiary Arrangements to its Safeguards Agreement. Following its decision, Iran informed the Agency of its readiness to work with the Agency to find a mutually acceptable solution to address the issue of modified Code 3.1. The Director General calls upon Iran to fulfil all of its legal obligations under the Subsidiary Arrangements to its Safeguards Agreement and fully implement modified Code 3.1.

26. The presence of multiple uranium particles of anthropogenic origin at three locations in Iran not declared to the Agency, as well as the presence of isotopically altered particles at one of these locations, is a clear indication that nuclear material and/or equipment contaminated by nuclear material has been present at these locations.

²⁶ GOV/2020/30, para. 4 third bullet; GOV/2021/15, para. 9, third bullet.

²⁷ GOV/2020/30, para.4, third bullet.

²⁸ GOV/2020/30, paras 3 and 5.

²⁹ GOV/2020/30, para. 5.

³⁰ GOV/2021/15, para. 17.

27. In its resolution of June 2020, the Board of Governors echoed the serious concern of the Director General that discussions “to clarify Agency questions related to possible undeclared nuclear material and nuclear related activities in Iran have not led to progress” and called on Iran to “fully cooperate with the Agency and satisfy the Agency’s requests without any further delay”.³¹ More than one year later, Iran has still not provided the necessary explanations for the presence of the nuclear material particles at any of the three locations (Locations 1, 3 and 4) where the Agency has conducted complementary accesses. Nor has Iran answered the Agency’s questions with regard to the other undeclared location (Location 2), or clarified the current location of natural uranium in the form of a metal disc.

28. The Director General remains deeply concerned that nuclear material has been present at undeclared locations in Iran and that the current locations of this nuclear material are not known to the Agency. The Director General is increasingly concerned that even after some two years the safeguards issues outlined above in relation to the four locations in Iran not declared to the Agency remain unresolved.

29. The Director General indicated that he was available to travel to Iran to meet members of the new administration to discuss these matters with a view to resolving them without delay. The Director General hopes that through a direct, cooperative and productive dialogue with the new Government of the Islamic Republic of Iran these urgent matters can be addressed.

30. The Director General reiterates the requirement for Iran to clarify and resolve these issues without further delay by providing information, documentation and answers to the Agency’s questions. The lack of progress in clarifying the Agency’s questions concerning the correctness and completeness of Iran’s safeguards declarations seriously affects the ability of the Agency to provide assurance of the peaceful nature of Iran’s nuclear programme.

31. The Director General will continue to report to the Board of Governors as appropriate.

³¹ GOV/2020/34, paras 3 and 4.