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Verification and monitoring in the Islamic Republic of Iran in light of United Nations Security Council resolution 2231 (2015)

Report by the Director General

A. Introduction

- 1. This report of the Director General to the Board of Governors and, in parallel, to the United Nations Security Council (Security Council), is on the Islamic Republic of Iran's (Iran's) implementation of its nuclear-related commitments under the Joint Comprehensive Plan of Action (JCPOA) and on matters related to verification and monitoring in Iran in light of Security Council resolution 2231 (2015). It covers the period since the issuance of the Director General's previous reports.¹
- 2. The estimated cost to the Agency for the implementation of Iran's Additional Protocol and for verifying and monitoring Iran's nuclear-related commitments as set out in the JCPOA is €10.4 million per annum, of which €4.6 million is funded by extrabudgetary contributions.² As of 12 February 2025, extrabudgetary funding had been pledged sufficient to meet the cost of JCPOA-related activities until the end of 2025.³

¹ GOV/2024/61, GOV/INF/2024/16, GOV/INF/2024/17, GOV/INF/2024/18.

² These figures have been adjusted to reflect current costs and the latest 2025 budget update.

³ The additional costs that the Agency has been incurring since 23 February 2021, while Iran has not been implementing its nuclear-related commitments under the JCPOA, will be communicated in due course once they have been assessed.

B. Background

- 3. On 14 July 2015, China, France, Germany, the Russian Federation, the United Kingdom, the United States of America, with the High Representative of the European Union for Foreign Affairs and Security Policy (E3/EU+3) and Iran agreed on the JCPOA. On 20 July 2015, the Security Council adopted resolution 2231 (2015), in which, inter alia, it requested the Director General to "undertake the necessary verification and monitoring of Iran's nuclear-related commitments for the full duration of those commitments under the JCPOA" and "[r]eport to the Board of Governors and in parallel to the Security Council, at any time if the Director General has reasonable grounds to believe there is an issue of concern directly affecting fulfilment of Iran's nuclear-related commitments as set out in the JCPOA" (GOV/2015/53 and Corr.1, para. 8). In August 2015, the Board of Governors authorized the Director General to implement the necessary verification and monitoring of Iran's nuclear-related commitments as set out in the JCPOA, and report accordingly, for the full duration of those commitments in light of Security Council resolution 2231 (2015), subject to the availability of funds and consistent with the Agency's standard safeguards practices.⁴
- 4. On 8 May 2018, the President of the United States of America, Donald Trump, announced the withdrawal of the United States from the "Iran nuclear deal".⁵

C. JCPOA Verification and Monitoring Activities

- 5. Between 16 January 2016 (JCPOA Implementation Day) and 8 May 2019, the Agency verified and monitored Iran's implementation of its nuclear-related commitments in accordance with the modalities set out in the JCPOA,⁶ consistent with the Agency's standard safeguards practices.^{7,8}
- 6. From 8 May 2019 onwards, however, Iran stopped implementing its nuclear-related commitments under the JCPOA on a step-by-step basis until, on 23 February 2021, it stopped implementing them altogether, including the Additional Protocol. As a result, Iran no longer allows the Agency to conduct the following verification and monitoring activities in relation to the JCPOA:
 - Monitor or verify Iranian production and stocks of heavy water (paras 14 and 15⁹).
 - Verify that the use of shielded cells at two locations, referred to in the decision of the Joint Commission of 14 January 2016 (INFCIRC/907), are being operated as approved by the Joint Commission (para. 21).

⁴ More background information to the matters outlined in this report can be found in previous quarterly reports of the Director General (most recently in GOV/2021/39).

⁵ 'Remarks by President Trump on the Joint Comprehensive Plan of Action', at: https://trumpwhitehouse.archives.gov/briefings-statements/remarks-president-trump-joint-comprehensive-plan-action/.

⁶ Including the clarifications referred to in para. 3 of GOV/2021/39.

⁷ GOV/2016/8, para. 6.

⁸ Note by the Secretariat, 2016/Note 5.

 $^{^{9}}$ The paragraph references in these bullet points correspond to the paragraphs of 'Annex I - Nuclear-related measures' of the JCPOA.

- Implement continuous monitoring to verify that all centrifuges and associated infrastructure in storage remain in storage or have been used to replace failed or damaged centrifuges (para. 70).
- Perform daily access upon request to the enrichment facilities at Natanz and Fordow, including to monitor Iran's production of stable isotopes (paras 71 and 51).
- Verify in-process low enriched nuclear material at enrichment facilities as part of the total enriched uranium stockpile (para. 56).
- Verify whether or not Iran has conducted mechanical testing of centrifuges as specified in the JCPOA (paras 32 and 40).
- Monitor or verify Iranian production and inventory of centrifuge rotor tubes, bellows or assembled rotors; verify whether produced rotor tubes and bellows are consistent with the centrifuge designs described in the JCPOA; verify whether produced rotor tubes and bellows have been used to manufacture centrifuges for the activities specified in the JCPOA (paras 80.1 and 80.2); verify whether rotor tubes and bellows have been manufactured using carbon fibre which meets the specifications agreed under the JCPOA.¹⁰
- Monitor or verify the uranium ore concentrate (UOC) produced in Iran or obtained from any other source; and whether such UOC has been transferred to the Uranium Conversion Facility (UCF) (paras 68 and 69).
- Verify Iran's other JCPOA nuclear-related commitments, including those set out in Sections D, E, S and T of Annex I of the JCPOA.
- 7. This has seriously affected the Agency's JCPOA-related verification and monitoring activities. The situation was exacerbated in June 2022 by Iran's decision to remove all of the Agency's JCPOA-related surveillance and monitoring equipment. As a result of not having been able to perform JCPOA-related verification and monitoring activities for four years, the Agency has lost continuity of knowledge in relation to the production and current inventory of centrifuges, rotors and bellows, heavy water and UOC, which it will not be possible to restore.

¹⁰ Decision of the Joint Commission of 14 January 2016 (INFCIRC/907).

C.1. Verification and monitoring of Iran's nuclear-related commitments

8. The status of the Agency's verification and monitoring of Iran's nuclear-related commitments under the JCPOA is as follows:

JCPOA Section	Commitment	Most recently verified
В	Arak Heavy Water Research Reactor	5 February 2025
C	Heavy Water Production Plant (HWPP)	February 2021 ¹¹ *
D	Other Reactors	Unavailable since February 2021
Е	Spent Fuel Reprocessing Activities	TRR: 4 February 2025
		MIX Facility: 8 February 2025
		JHL: 29 January 2025
		Shielded cells: February 2021*
F	Enrichment Capacity	FFEP: 22 February 2025
		FEP: 19 February 2025
		PFEP: 18 February 2025
G	Centrifuge Research and Development	18 February 2025
Н	Fordow Fuel Enrichment Plant (FFEP)	22 February 2025
Ι	Other Aspects of Enrichment	See Sections F, G and H above
J	Uranium Stocks and Fuels	7 February 2025
K	Centrifuge Manufacturing	February 2021*
L	Additional Protocol (AP) & Modified Code 3.1	February 2021*
N	Modern Technologies and Long-term Presence of	OLEM: June 2022
	IAEA	125 inspectors currently designated
О	Transparency related to UOC	February 2021*
P	Transparency related to enrichment	February 2021*
Q	Access	Unavailable since February 2021
R	Centrifuge Component Manufacturing Transparency	February 2021*
S	Other Uranium Isotope Separation Activities	February 2021*
Т	Activities Which Could Contribute to the Design and Development of a Nuclear Explosive Device	February 2021*

^{*} Verification and monitoring no longer allowed by Iran.

C.2. Activities Related to Heavy Water and Reprocessing

9. As of 5 February 2025, minor civil construction work was ongoing at the Khondab Heavy Water Research Reactor (KHRR). Although the commissioning of KHRR had been expected in 2023 using IR-20 dummy fuel assemblies, ¹² Iran informed the Agency in August 2024 that commissioning was now

¹¹ Based on its analysis of commercially available satellite imagery, the Agency assessed that the HWPP continued to operate during the reporting period.

¹² IR-20 dummy fuel assemblies have already been manufactured, based on an Iranian design (GOV/2023/57, para. 8).

expected to take place in 2025 and operation to start in 2026. On 5 February 2025, the Agency did not observe any significant changes at KHRR compared to the Director General's previous quarterly report.

C.3. Activities Related to Enrichment

C.3.1. Summary of Iran's Enrichment Capacity

Facility	Centrifuge Type	Total Planned Cascades ¹³	Installed Cascades	Total Operating Cascades ¹⁴
Fordow Fuel	IR-1		6	6
Enrichment Plant (FFEP)	IR-6	16 ¹⁵	10	7 (+5)*
	IR-1	36	36	36
Fuel	IR-2m	39	39 (+2)	27 (+12)
Enrichment Plant (FEP)	IR-4	30 (+18)	18 (+6)	12
Tiant (TET)	IR-6	3	3	3
	IR-4 (Line 4)	1	1	1
	IR-6 (Line 6)	1	1	1
	IR-4 and IR-6 (Line 5)	1	1	1
Pilot Fuel Enrichment	Various (Lines 1, 2 and 3)			
Plant (PFEP)	IR-2m (Hall A1000, Lines D-R)	15 ¹⁶ (+14)	1 (+1)	1 (+1)
	IR-6 (Hall A1000, Lines D-R)		2 (+1)	1
	Various (Hall A1000, Lines A, B, C and E)			

^{*} The figures in parentheses indicate the changes since the Director General's previous quarterly report.

¹³ The figures for FEP do not include the planned installation of centrifuges in Hall B1000, for which no details of centrifuge types or numbers of cascades have yet been provided by Iran.

¹⁴ Cascades are considered to be operating if they have been fed with UF₆ for enrichment of collected product.

¹⁵ Iran has declared that it will replace the six cascades of IR-1 centrifuges in Unit 2 with IR-6 centrifuges.

 $^{^{16}}$ Iran has informed the Agency that it could install IR-2m, IR-4 and/or IR-6 centrifuges in 15 R&D production lines (identified as Lines D-R). As of 18 February 2025, no IR-4 centrifuges had been installed in Lines D-R.

C.3.2. Developments at enrichment facilities

FFEP

- 10. On 2 December 2024, Iran informed the Agency that henceforth it intended to feed the two IR-6 cascades producing UF₆ enriched up to 60% U-235 at FFEP with UF₆ enriched up to 20% U-235, rather than UF₆ enriched up to 5% U-235, without altering the enrichment level of the product. On 5 December 2024, Iran started feeding the two IR-6 cascades accordingly. The effect of this change has been to significantly increase the rate of production of UF₆ enriched up to 60% at FFEP to over 34 kg of uranium in the form of UF₆ per month. On the same day, the Agency verified that Iran had started feeding two of the eight IR-6 cascades installed in Unit 1 with natural UF₆ for the production of UF₆ enriched up to 5% U-235. The product of the IR-6 cascades in Unit 1 is combined with the tails of the IR-6 cascades in Unit 2 and collected each stream involves UF₆ enriched up to 5% U-235.
- 11. Iran agreed to the Agency's request to increase the frequency and intensity of the implementation of safeguards measures and is facilitating the implementation of this strengthened safeguards approach at FFEP.¹⁹
- 12. On 17 December 2024, the Agency verified that Iran had started feeding two additional IR-6 cascades installed in Unit 1 with natural UF₆ for the production of UF₆ enriched up to 5% U-235.
- 13. On 22 February 2025, the Agency verified at FFEP in Unit 2 that Iran was feeding: UF₆ enriched up to 5% U-235 into up to 1044 IR-1 centrifuges in three sets of two interconnected cascades to enrich UF₆ up to 20% U-235; UF₆ enriched up to 20% U-235 into up to 350 IR-6 centrifuges in one set of two interconnected cascades to enrich UF₆ up to 60% U-235; and, in Unit 1, depleted UF₆ into up to 870 IR-6 centrifuges in five cascades to enrich UF₆ up to 5% U-235. On the same date, the Agency also verified that no IR-1 centrifuges had yet been replaced with IR-6 centrifuges in Unit 2.
- 14. On 22 February 2025, the Agency verified that passivation of the remaining three IR-6 cascades in Unit 1²⁰ and re-installation of the feed and withdrawal station for Unit 1 had yet to begin;²¹ and that the product from Unit 1 continued to be collected in the same receiving cylinder as that used for collecting the tails produced from Unit 2.²²

FEP

- 15. On 16 November 2024, the Agency verified that installation of the 18 planned IR-2m cascades in one enrichment unit in Hall A1000 had been completed. The Agency also verified that the planned installation of additional enrichment units in Hall B1000 had yet to begin. On 11 February 2025, the Agency verified that Iran had begun feeding natural UF $_6$ into four of these IR-2m cascades to produce UF $_6$ enriched up to 5% U-235.
- 16. On 22 November 2024, Iran informed the Agency that it intended to install 18 cascades, each of up to 166 IR-4 centrifuges, in another enrichment unit in Hall A1000 at FEP.²³ On 18 February 2025,

¹⁷ GOV/INF/2024/17, para. 3.

¹⁸ This compares to the production rate achieved, for example, in the previous quarterly reporting period of 4.7 kg of uranium in the form of UF₆ per month.

¹⁹ GOV/INF/2024/18, para. 3.

²⁰ Passivation is a preparatory activity conducted prior to enrichment, whereby the tails and product are recombined.

²¹ GOV/2024/41, para. 11.

²² GOV/INF/2024/17, para. 8.

²³ GOV/INF/2024/16, para. 7.

the Agency verified that, of the planned installation of 18 IR-4 cascades, installation of six cascades had been completed and that installation of another one cascade was ongoing.

- 17. On 9 December 2024, the Agency verified that Iran had begun feeding natural UF₆ into an additional six IR-2m cascades installed in one enrichment unit in Hall A1000 of FEP at Natanz to produce UF₆ enriched up to 5% U-235.²⁴
- 18. On 19 February 2025, the Agency verified at FEP that 36 IR-1 cascades, 27 IR-2m cascades, 12 IR-4 cascades and 3 IR-6 cascades were being fed with natural UF₆ to produce UF₆ enriched up to 5% U-235.

PFEP

- 19. On 22 November 2024, Iran informed the Agency that, in the 18 research and development (R&D) production lines of PFEP in Hall A1000, it intended to: continue to test individual, small, intermediate and full cascades in three R&D lines (identified as Lines A–C); test intermediate and full cascades of up to 174 IR-4, IR-6 or IR-2m centrifuges in the remaining fifteen R&D production lines (identified as Lines D–R); and enable six of these R&D production lines (identified as lines M–R) to operate as either independent or interconnected pairs of cascades. In these R&D and R&D production lines Iran will produce UF₆ enriched up to 5% U-235, from natural or depleted UF₆.²⁵
- 20. Also on 22 November 2024, Iran informed the Agency that it intended to install one cascade of up to 1152 IR-6 centrifuges in the second enrichment unit of PFEP in Hall A1000 to produce UF₆ enriched up to 5% U-235, from natural or depleted UF₆. 26
- 21. On 18 February 2025, the Agency verified that the activities at PFEP were as follows:
 - R&D lines 1, 2 and 3 in the original area of PFEP: Iran has continued to accumulate uranium enriched up to 2% U-235 through feeding natural UF₆ into small and intermediate cascades comprising up to: 12 IR-1 centrifuges; 92 IR-2m centrifuges and ten IR-2m centrifuges; ten IR-4 centrifuges; nine IR-5 centrifuges and 19 IR-5 centrifuges; 19 IR-6 centrifuges in each of three separate cascades. The following single centrifuges were being tested with natural UF₆ but not accumulating enriched uranium: three IR-2m centrifuges; six IR-4 centrifuges; three IR-5 centrifuges; four IR-6 centrifuges; one IR-6s centrifuge; one IR-7 centrifuge; one IR-8 centrifuge; one IR-8 centrifuge; and one IR-9 centrifuge.
 - R&D production lines 4, 5 and 6 in the original area of PFEP: Iran was feeding UF₆ enriched up to 5% U-235 into two interconnected cascades in R&D production lines 4 and 6, comprising up to 164 IR-4 and up to 164 IR-6 centrifuges, respectively, to produce UF₆ enriched up to 60% U-235 and the tails produced from R&D production line 6 were being fed into a cascade of up-to 168 IR-4 and four IR-6 centrifuges in R&D production line 5.
 - PFEP area in Hall A1000: Iran has continued to accumulate uranium enriched up to 5% U-235 through feeding depleted UF₆ into small and intermediate cascades of up to 19 IR-4 centrifuges, 4 IR-6 centrifuges, 20 IR-6 centrifuges and 20 IR-6s centrifuges in R&D lines A, B and C and into a full cascade of up to 174 IR-6 centrifuges in R&D production line D and a full cascade of up to 174 IR-2m centrifuges in line E. One full cascade of up to 174 IR-6 centrifuges

²⁴ GOV/INF/2024/18, para. 4.

²⁵ GOV/INF/2024/16, para. 9.

²⁶ GOV/INF/2024/16, para. 10.

was installed in line R and installation of a second full cascade of up to 174 IR-6 centrifuges in line Q was ongoing.

C.4. Activities Related to Fuel

- 22. **Fuel Plate Fabrication Plant (FPFP):** On 3 February 2025, the Agency verified that no progress had been made regarding the remaining two stages of the process²⁷ for the production of UF₄ from UF₆. Installation of the equipment for the first stage of the process had been completed but had yet to undergo testing using nuclear material. Iran has not produced any uranium metal during this reporting period. As of 9 February 2025, Iran had fed two cylinders containing 31.6 kg of uranium in the form of UF₆ enriched up to 20% U-235 into the conversion process for conversion into U₃O₈. From this material, Iran had produced three control fuel assemblies and three standard fuel assemblies containing a total of 7.7 kg of uranium in the form of U₃O₈, which had been verified and placed under seal by the Agency. One additional standard fuel assembly containing 1.45 kg of uranium in the form of U₃O₈ had been produced but had yet to undergo quality control.
- 23. **UCF:** As of 12 February 2025, the Agency verified that no nuclear material had been introduced into the uranium metal production area of UCF at Esfahan, where installation of equipment had been completed and which was ready to operate.²⁸
- 24. **Tehran Research Reactor (TRR):** As of 4 February 2025, the Agency verified that all previously irradiated TRR fuel elements in Iran had a measured dose rate of no less than 1 rem/hour (at one metre in air), except one control fuel assembly.²⁹ On the same day, the Agency verified that 11 fresh TRR standard fuel assemblies and one control fuel assembly, previously received from FPFP, had yet to be irradiated.
- 25. **Uranium conversion campaign:** As previously reported, in August 2024, Iran informed the Agency that the purpose of a campaign to convert 650 kg of UF₆ enriched up to 5% U-235 into UO₂, which had begun on 21 May 2024 at the facilities at Esfahan, was for the production of low enriched uranium (LEU) fuel assemblies for KHRR.³⁰ This LEU conversion campaign involves individual conversion and fuel assembly lines at the Enriched UO₂ Powder Plant (EUPP), FPFP, UCF and the Fuel Manufacturing Plant (FMP). From 30 October 2024 to 7 February 2025, 368 kg of uranium in the form of UO₂ enriched up to 5% U-235 were received at FMP from UCF, of which 343 kg of uranium had been fed to produce KHRR fuel pellets.

²⁷ GOV/INF/2021/3, para. 5.

²⁸ GOV/2023/24, para. 49.

²⁹ The amount of uranium in the irradiated control fuel assembly has been included in the enriched uranium stockpile.

³⁰ GOV/2024/41, para. 23.

C.5. Enriched Uranium Stockpile

- 26. Iran has estimated³¹ that at FFEP from 26 October 2024 to 7 February 2025:
 - 117.9 kg of UF₆ enriched up to 60% U-235 were produced;^{32,33}
 - 359.5 kg of UF₆ enriched up to 20% U-235 were fed into the cascades;
 - 61.9 kg of UF₆ enriched up to 20% U-235 were produced;³⁴
 - 683.4 kg of UF₆ enriched up to 5% U-235 were fed into cascades;
 - 105.2 kg of UF₆ enriched up to 5% U-235 were produced;
 - 254.4 kg of UF₆ enriched up to 5% U-235 were accumulated as tails;
 - 601.7 kg of UF₆ enriched up to 2% U-235 were accumulated as tails; and
 - 146.2 kg of UF₆ enriched up to 2% U-235 were accumulated as dump.³⁵
- 27. Iran has estimated³⁶ that at FEP from 26 October 2024 to 7 February 2025, 2205.2 kg of UF₆ enriched up to 5% U-235 were produced from natural UF₆.
- 28. Iran has estimated³⁷ that at PFEP from 26 October 2024 to 7 February 2025:
 - 17.3 kg of UF₆ enriched up to 60% U-235 were produced in R&D production lines 4 and 6;³⁸
 - 471.9 kg of UF₆ enriched up to 5% U-235 were fed into cascades installed in R&D production lines 4, 5 and 6;
 - 141.2 kg of UF₆ enriched up to 5% U-235 were produced in R&D production line 5;
 - 20.7 kg of UF₆ enriched up to 5% U-235 were produced in Hall A1000, R&D lines A, B and C and R&D production line D;
 - 59.8 kg of UF₆ enriched up to 2% U-235 were produced in R&D lines 1, 2 and 3; and

³¹ The amount of UF₆ enriched up to 60% U-235 produced at FFEP is based on the amount verified by the Agency when collecting cylinders are detached from the process. For other material categories at FFEP, Iran's estimates are reported.

³² The amount of UF₆ enriched up to 60% U-235 comprises 111.2 kg of UF₆ that was collected in UF₆ product cylinders and 6.7 kg of UF₆ that was accumulated and discharged from the HEU dump cold traps during this reporting period.

³³ The Agency has verified all 265.7 kg of UF₆ enriched up to 60% U-235 that has been produced since 21 November 2022.

 $^{^{34}}$ Out of the overall production of UF₆ enriched up to 20% U-235 at FFEP since 16 February 2021, the Agency has verified 1083.3 kg of UF₆ enriched up to 20% U-235.

 $^{^{35}}$ Iran's estimated total of the dump from all the enrichment processes at FFEP (i.e. not used for the enrichment of UF₆ or transformed into other forms of material held up in process equipment), of which 115.3 kg of UF₆ was discharged from the LEU cold traps and is included in the stockpile of UF₆ enriched up to 2% U-235 in this report.

³⁶ Since 23 February 2021, as the Agency has only been able to verify Iran's production of enriched UF₆ at FEP once the enriched uranium product has been removed from the process, the quantity of nuclear material that remains in the process can only be estimated. Out of the overall production of UF₆ enriched up to 5% U-235 at FEP since 16 February 2021, the Agency has verified 17 412.4 kg of UF₆ enriched up to 5% U-235.

³⁷ The amount of UF₆ enriched up to 60% U-235 produced at PFEP is based on the amount verified by the Agency when collecting cylinders are detached from process. For other material categories at PFEP, Iran's estimates are reported.

³⁸ The Agency has verified all 216.3 kg of UF₆ enriched up to 60% U-235 that has been produced at PFEP since 14 April 2021.

- 313.7 kg of UF₆ enriched up to 2% U-235 were accumulated as tails from R&D production line 5.
- 29. Since 16 February 2021, the Agency has not been able to verify Iran's total enriched uranium stockpile³⁹ precisely on any given day, needing to rely instead on a small proportion of the total being based on Iran's estimates. Based on the information provided by Iran as described in the previous paragraphs and summarised in Annex I, the Agency has estimated that, as of 8 February 2025, Iran's total enriched uranium stockpile was 8294.4 kg. This figure represents an increase of 1690.0 kg since the previous quarterly report. The estimated stockpile comprised: 7464.0 kg of uranium in the form of UF₆; 626.9 kg of uranium in the form of uranium oxide and other intermediate products; 60.8 kg of uranium in fuel assemblies, plates and rods; 4.4 kg of uranium in targets; and 138.3 kg of uranium in liquid and solid scrap.
- 30. As of 8 February 2025, the Agency has estimated that the total enriched uranium stockpile in the form of UF₆ of 7464.0 kg comprised:
 - 2927.0 kg of uranium enriched up to 2% U-235 (+736.1 kg since the previous quarterly report);⁴⁰
 - 3655.4 kg of uranium enriched up to 5% U-235 (+1060.6 kg);
 - 606.8 kg of uranium enriched up to 20% U-235 (-232.4 kg); and
 - 274.8 kg of uranium enriched up to 60% U-235 (+92.5 kg). 41,42
- 31. As of 8 February 2025, the Agency verified that the inventory of uranium enriched up to 20% U-235 in forms other than UF₆ was 56.1 kg, consisting of 35.3 kg of uranium in fuel assemblies, 43 plates and rods, 2.8 kg of uranium in targets, 12.4 kg of uranium in other intermediate products, and 5.6 kg of uranium in liquid and solid scrap.
- 32. As of 8 February 2025, the inventory of uranium enriched up to 60% U-235 in forms other than UF₆ remains 2.0 kg of uranium as previously reported, consisting of 1.6 kg of uranium in irradiated targets, ⁴⁴ verified at TRR on 9 February 2025, and 0.4 kg of uranium in liquid and solid scrap, verified at FPFP on 9 February 2025.

³⁹ Comprising enriched uranium produced at FEP, PFEP and FFEP and used as feed material at PFEP and FFEP.

⁴⁰ This includes 115.3 kg of UF₆ (77.8 kg of uranium) that was discharged from the LEU cold traps during this reporting period (See footnote 32).

⁴¹ This includes 1.2 kg of uranium enriched up to 60% U-235 that was accumulated in the HEU dump cold traps at FFEP before this reporting period, but discharged during this reporting period (see footnote 29).

⁴² A small amount of UF₆ with an enrichment level between 20% and 60% U-235 is generated from the mixing, at PFEP, of UF₆ with an enrichment level close to 20% U-235 and UF₆ with an enrichment level close to 60% U-235 during homogenization and sampling. This amount is not included in the stockpile.

⁴³ During the reporting period, seven fresh fuel assemblies containing 9.15 kg of uranium and 95 plates containing 7.4 kg of uranium enriched up to 20% U-235 were produced for use at the Tehran Research Reactor.

⁴⁴ Irradiated at TRR and stored in the reactor pool.

D. Other Relevant Information

- 33. As previously reported,⁴⁵ 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. The Director General requested Iran to reverse its decision to withdraw the designations.
- 34. During high level meetings between the Agency and Iran in Tehran on 14 November 2024, Iran agreed to respond to the Agency's concerns related to Iran's withdrawal of the designation of several experienced Agency inspectors by considering the acceptance of the designation of four additional experienced inspectors.
- 35. Iran, in a letter dated 16 December 2024, informed the Agency that "[b]earing in mind the developments that took place compromising the joint efforts by Iran and the Agency before the recent Board of Governors' session" it was not accepting the designations of four inspectors proposed by the Agency in a letter dated 12 December 2024.

E. Summary

- 36. The Agency's JCPOA-related verification and monitoring has been seriously affected by the cessation of implementation by Iran of its nuclear-related commitments under the JCPOA. The situation has been exacerbated by Iran's subsequent decision to have all of the Agency's JCPOA-related surveillance and monitoring equipment removed.
- 37. The Agency has lost continuity of knowledge in relation to the production and current inventory of centrifuges, rotors and bellows, heavy water and UOC, which it will not be able to restore as a result of not having been able to perform JCPOA-related verification and monitoring activities for four years.
- 38. Iran's decision to remove all of the Agency's equipment previously installed in Iran for JCPOA-related surveillance and monitoring activities has also had detrimental implications for the Agency's ability to provide assurance of the peaceful nature of Iran's nuclear programme.
- 39. It has also been four years since Iran stopped provisionally applying its Additional Protocol. Therefore, throughout this period, Iran has not provided updated declarations and the Agency has not been able to conduct complementary access to any sites and other locations in Iran.
- 40. The significantly increased production and accumulation of high enriched uranium by Iran, the only non-nuclear weapon State to produce such nuclear material, is of serious concern.
- 41. The Director General deeply regrets that Iran, despite having indicated a willingness to consider accepting the designation of four additional experienced Agency inspectors, did not accept their designations.
- 42. The Director General will continue to report as appropriate.

⁴⁵ GOV/INF/2023/14, para. 1.

Annex I

Enriched UF₆ Feed, Production and Inventory since the Director General's previous Quarterly Report

Facility	Centrifuge Type	Feed Enrichment Level (% U-235)	Quantity Fed (kgUF ₆)	Product Enrichment Level (% U-235)	Quantity Produced (kgUF ₆)
FFEP	IR-1	<5%	683.4	<20%	61.9
				<2%	601.7
	IR-6	Natural, Depleted	-	<5%	105.2
				<60%	117.9
		<20% ⁴⁶	359.5	<5%	254.4
FEP	IR-1		-	<5%	2205.2
	IR-2m	Natural			
	IR-4				
	IR-6				
PFEP	IR-4 (Line 4) and IR-6 (Line 6)	<5%	471.9	<60%	17.3
	IR-4 and IR-6 (Line 5)	Tails from Line 6 N/A	<5%	141.2	
			N/A	<2%	313.7
	Various (Lines 1, 2 and 3)	Natural	-	<2%	59.8
	Hall A1000: Various (Lines A, B and C), IR-6 (Line D) and IR-2m (Line E)	Natural, Depleted	-	<5%	20.7

 $^{^{46}}$ The IR-6 cascades producing UF₆ enriched up to 60% U-235 were fed with UF₆ enriched up to 5% U-235 from 26 October to 3 December 2024.

Enrichment level (% U-235)	Inventory as at 26 October 2024 (kgU)	Quantity Fed (kgU)	Quantity Produced (kgU)	Inventory as at 8 February 2025 (kgU)
<2%	2190.9		658.3	2927.0 ⁴⁷
<5%	2594.8	779.8	1840.5	3655.4
<20%	839.2	242.7	41.8	606.8 ⁴⁸
<60%	182.3		91.3	274.8 ⁴⁹

⁴⁷ See footnote 40.

⁴⁸ See para. 22.

⁴⁹ See footnote 37.

Annex II

List of acronyms

AEOI Atomic Energy Organization of Iran

DIQ Design Information Questionnaire

DIV Design Information Verification

EUPP Enriched Uranium Powder Plant

FEP Fuel Enrichment Plant

FLUM Flow-rate Unattended Monitoring

FMP Fuel Manufacturing Plant

FPFP Fuel Plate Fabrication Plant

FFEP Fordow Fuel Enrichment Plant

HWPP Heavy Water Production Plant

JCPOA Joint Comprehensive Plan of Action

JHL Jaber Ibn Hayan Multipurpose Laboratory

KHRR Khondab Heavy Water Research Reactor

MIX facility Molybdenum, Iodine and Xenon Radioisotope Production facility

OLEM On-Line Enrichment Monitor

PFEP Pilot Fuel Enrichment Plant

PIV Physical Inventory Verification

TRR Tehran Research Reactor

UCF Uranium Conversion Facility

UOC Uranium Ore Concentrate