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# **Board of Governors**

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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 report.<sup>1</sup>
- 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.<sup>2</sup> As of 30 May 2025, extrabudgetary funding had been pledged sufficient to meet the cost of JCPOA-related activities until the end of 2025.<sup>3</sup>

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

<sup>&</sup>lt;sup>1</sup> GOV/2025/8 and Corr.1.

<sup>&</sup>lt;sup>3</sup> 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.<sup>4</sup>
- 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".<sup>5</sup>

# 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,<sup>6</sup> consistent with the Agency's standard safeguards practices.<sup>7,8</sup>
- 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 15<sup>9</sup>).
  - 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).

<sup>&</sup>lt;sup>4</sup> 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).

<sup>&</sup>lt;sup>5</sup> 'Remarks by President Trump on the Joint Comprehensive Plan of Action', at: <a href="https://trumpwhitehouse.archives.gov/briefings-statements/remarks-president-trump-joint-comprehensive-plan-action/">https://trumpwhitehouse.archives.gov/briefings-statements/remarks-president-trump-joint-comprehensive-plan-action/</a>.

<sup>&</sup>lt;sup>6</sup> Including the clarifications referred to in para. 3 of GOV/2021/39.

<sup>&</sup>lt;sup>7</sup> GOV/2016/8, para. 6.

<sup>&</sup>lt;sup>8</sup> Note by the Secretariat, 2016/Note 5.

 $<sup>^{9}</sup>$  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.<sup>10</sup>
- 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 more than 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.

## 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	14 May 2025
С	Heavy Water Production Plant (HWPP)	February 2021 <sup>11</sup> *
D	Other Reactors	Unavailable since February 2021
Е	Spent Fuel Reprocessing Activities	TRR: 17 May 2025
		MIX Facility: 20 May 2025
		JHL: 19 May 2025
		Shielded cells: February 2021*
F	Enrichment Capacity	FFEP: 28 May 2025

<sup>&</sup>lt;sup>10</sup> Decision of the Joint Commission of 14 January 2016 (INFCIRC/907).

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

		FEP: 27 May 2025 PFEP: 27 May 2025	
G	Centrifuge Research and Development	27 May 2025	
Н	Fordow Fuel Enrichment Plant (FFEP)	28 May 2025	
I	Other Aspects of Enrichment	See Sections F, G and H above	
J	Uranium Stocks and Fuels	17 May 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	124 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*	

<sup>\*</sup> Verification and monitoring no longer allowed by Iran.

# C.2. Activities Related to Heavy Water and Reprocessing

9. As of 14 May 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, <sup>12</sup> Iran informed the Agency in August 2024 that commissioning was now expected to take place in 2025 and operation to start in 2026. On 14 May 2025, the Agency did not observe any significant changes at KHRR compared to the Director General's previous quarterly report.

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

# C.3. Activities Related to Enrichment

## C.3.1. Summary of Iran's Enrichment Capacity

Facility	Centrifuge Type	Total Planned Cascades <sup>13</sup>	Installed Cascades	Total Operating Cascades <sup>14</sup>
Fordow Fuel	IR-1		6	6
Enrichment Plant (FFEP)	IR-6	16 <sup>15</sup>	10	7
	IR-1	36	36	36
Fuel	IR-2m	39	39	31 (+4)*
Enrichment Plant (FEP)	IR-4	30	23 (+5)	12
Trant (PET)	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	Various (Lines 1, 2 and 3)			
Enrichment Plant (PFEP)	IR-2m (Hall A1000, Lines D-R)	15 <sup>16</sup>	1	1
	IR-6 (Hall A1000, Lines D-R)	15**	4 (+2)	3 (+2)
	Various (Hall A1000, Lines A, B, C and E)			
	1152 IR-6 cascade (Hall A1000)	1	0	0

<sup>\*</sup> The figures in parentheses indicate the changes since the Director General's previous quarterly report.

<sup>&</sup>lt;sup>13</sup> 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.

<sup>&</sup>lt;sup>14</sup> Cascades are considered to be operating if they have been fed with UF<sub>6</sub> for enrichment of collected product.

<sup>&</sup>lt;sup>15</sup> Iran has declared that it will replace the six cascades of IR-1 centrifuges in Unit 2 with IR-6 centrifuges.

<sup>&</sup>lt;sup>16</sup> 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 27 May 2025, no IR-4 centrifuges had been installed in Lines D-R.

## C.3.2. Developments at enrichment facilities

#### **FFEP**

- 10. As previously reported, on 5 December 2024, Iran started feeding the two IR-6 cascades producing UF<sub>6</sub> enriched up to 60% U-235 at FFEP with UF<sub>6</sub> enriched up to 20% U-235, rather than UF<sub>6</sub> enriched up to 5% U-235, without altering the enrichment level of the product.<sup>17</sup> The effect of this change has been to significantly increase the rate of production of UF<sub>6</sub> enriched up to 60% at FFEP to over 34 kg of uranium in the form of UF<sub>6</sub> per month.
- 11. On 28 May 2025, the Agency verified at FFEP in Unit 2 that Iran was feeding: UF<sub>6</sub> enriched up to 5% U-235 into up to 1044 IR-1 centrifuges in three sets of two interconnected cascades to enrich UF<sub>6</sub> up to 20% U-235; UF<sub>6</sub> enriched up to 20% U-235 into up to 350 IR-6 centrifuges in one set of two interconnected cascades to enrich UF<sub>6</sub> up to 60% U-235; and, in Unit 1, natural UF<sub>6</sub> into up to 870 IR-6 centrifuges in five cascades to enrich UF<sub>6</sub> 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.
- 12. On 28 May 2025, the Agency verified that passivation of the remaining three IR-6 cascades in Unit 1<sup>18</sup> and re-installation of the feed and withdrawal station for Unit 1 had yet to begin;<sup>19</sup> 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.<sup>20</sup>

#### **FEP**

- 13. On 28 May 2025, the Agency verified that the planned installation of additional enrichment units in Hall B1000 had yet to begin.
- 14. On 27 May 2025, the Agency verified that, of the planned installation of 18 IR-4 cascades in another enrichment unit in Hall A1000 at FEP, installation of 11 cascades had been completed and that installation of centrifuges in another one cascade was ongoing. A small number of centrifuges had been placed in the remaining six cascades.
- 15. On 27 May 2025, the Agency verified at FEP that 36 IR-1 cascades, 31 IR-2m cascades, 12 IR-4 cascades and 3 IR-6 cascades were being fed with natural UF<sub>6</sub> to produce UF<sub>6</sub> enriched up to 5% U-235.

#### PFEP

16. As previously reported, in 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 UF<sub>6</sub> enriched up to 5% U-235, from natural or depleted UF<sub>6</sub>.<sup>21</sup> Iran also informed the Agency that it intended to install one cascade of up to 1152 IR-6 centrifuges in the second enrichment

<sup>&</sup>lt;sup>17</sup> GOV/INF/2024/17, para. 3.

<sup>&</sup>lt;sup>18</sup> Passivation is a preparatory activity conducted prior to enrichment, whereby the tails and product are recombined.

<sup>&</sup>lt;sup>19</sup> GOV/2024/41, para. 11.

<sup>&</sup>lt;sup>20</sup> GOV/INF/2024/17, para. 8.

<sup>&</sup>lt;sup>21</sup> GOV/INF/2024/16, para. 9.

unit of PFEP in Hall A1000 to produce UF<sub>6</sub> enriched up to 5% U-235, from natural or depleted UF<sub>6</sub>.<sup>22</sup>

- 17. On 27 May 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 UF<sub>6</sub> into small and intermediate cascades comprising up to: 12 IR-1 centrifuges; 88 IR-2m centrifuges and 10 IR-2m centrifuges; 10 IR-4 centrifuges and 4 IR-4 centrifuges; 9 IR-5 centrifuges and 19 IR-5 centrifuges; 20 IR-6 centrifuges, 19 IR-6 centrifuges and 10 IR-6 centrifuges. The following single centrifuges were being tested with natural UF<sub>6</sub> but not accumulating enriched uranium: two IR-2m centrifuges; six IR-4 centrifuges; two IR-5 centrifuges; eight IR-6 centrifuges; one IR-7 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 UF<sub>6</sub> 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 UF<sub>6</sub> 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 UF<sub>6</sub> into small and intermediate cascades of up to: 34 IR-4 centrifuges and 21 IR-4 centrifuges; 7 IR-6 centrifuges, 3 IR-6 centrifuges and 21 IR-6 centrifuges; and 20 IR-6s centrifuges in R&D lines A, B and C, and into three full cascades of up to 174 IR-6 centrifuges in R&D production lines D, Q and R, a full cascade of up to 174 IR-2m centrifuges in line E and an intermediate cascade of up to 40 IR-6 centrifuges in line F. The cascades in R&D production lines Q and R were being operated as independent cascades. One full cascade of up to 174 IR-6 centrifuges was installed in line P.

## C.4. Activities Related to Fuel

- 18. **Fuel Plate Fabrication Plant (FPFP):** Since February 2025, Iran has been facilitating the implementation of a strengthened safeguards approach at FPFP. On 11 May 2025, the Agency verified that no progress had been made regarding the remaining two stages of the process<sup>23</sup> for the production of UF<sub>4</sub> from UF<sub>6</sub>. The equipment for the first stage of the process had yet to undergo testing using nuclear material. Iran has not produced any uranium metal during this reporting period. As of 16 May 2025, Iran had fed two cylinders containing 31.6 kg of uranium in the form of UF<sub>6</sub> enriched up to 20% U-235 into the conversion process for conversion into U<sub>3</sub>O<sub>8</sub>. From this material, Iran had produced four control fuel assemblies and eleven standard fuel assemblies containing a total of 20.6 kg of uranium in the form of U<sub>3</sub>O<sub>8</sub>, which had been verified and placed under seal by the Agency.
- 19. On 12 March 2025, the Agency verified the receipt at FPFP from the Russian Federation of the fourth increment of partially fabricated fuel items, consisting of 3.5 kg of uranium enriched up to 20% U-235 in the form of  $U_3O_8$ . On 12 May 2025, the seals were removed from this material to allow Iran to begin producing fuel assemblies for the Tehran Research Reactor (TRR).
- 20. UCF: As of 13 May 2025, the Agency verified that no nuclear material had been introduced into the uranium metal production area of UCF at Esfahan, where installed equipment was ready to operate.<sup>24</sup>

<sup>&</sup>lt;sup>22</sup> GOV/INF/2024/16, para. 10.

<sup>&</sup>lt;sup>23</sup> GOV/INF/2021/3, para. 5.

<sup>&</sup>lt;sup>24</sup> GOV/2023/24, para. 49.

- 21. **TRR:** As of 18 May 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 and one test fuel assembly.<sup>25</sup> 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.
- 22. **Uranium conversion campaign:** As previously reported, in August 2024, Iran informed the Agency that the purpose of a campaign to convert 650 kg of UF<sub>6</sub> enriched up to 5% U-235 into UO<sub>2</sub>, 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.<sup>26</sup> This LEU conversion campaign involves individual conversion and fuel assembly lines at the Enriched UO<sub>2</sub> Powder Plant (EUPP), FPFP, UCF and the Fuel Manufacturing Plant (FMP). As of 23 May 2025, 368 kg of uranium in the form of UO<sub>2</sub> enriched up to 5% U-235 had been received at FMP from UCF, from which 129 kg of uranium in the form of KHRR fuel pellets had been produced.

## C.5. Enriched Uranium Stockpile

- 23. Iran has estimated<sup>27</sup> that at FFEP from 8 February to 16 May 2025:
  - 166.6 kg of UF<sub>6</sub> enriched up to 60% U-235 were produced;<sup>28,29</sup>
  - 560.3 kg of UF<sub>6</sub> enriched up to 20% U-235 were fed into the cascades;
  - 68.0 kg of UF<sub>6</sub> enriched up to 20% U-235 were produced;<sup>30</sup>
  - 441.8 kg of UF<sub>6</sub> enriched up to 5% U-235 were fed into cascades;
  - 229.1 kg of UF<sub>6</sub> enriched up to 5% U-235 were produced;
  - 396.9 kg of UF<sub>6</sub> enriched up to 5% U-235 were accumulated as tails;
  - 368.7 kg of UF<sub>6</sub> enriched up to 2% U-235 were accumulated as tails; and
  - 98.5 kg of UF<sub>6</sub> enriched up to 2% U-235 were accumulated as dump.
- 24. Iran has estimated<sup>31</sup> that at FEP from 8 February to 16 May 2025, 2671.3 kg of UF<sub>6</sub> enriched up to 5% U-235 were produced either from 1867.3 kg of UF<sub>6</sub> enriched up to 2% U-235 or from natural UF<sub>6</sub>.
- 25. Iran has estimated<sup>32</sup> that at PFEP from 8 February to 16 May 2025:

<sup>27</sup> The amount of UF<sub>6</sub> 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.

<sup>&</sup>lt;sup>25</sup> The amount of uranium in the irradiated control fuel assembly and test fuel assembly has been included in the enriched uranium stockpile.

<sup>&</sup>lt;sup>26</sup> GOV/2024/41, para. 23.

 $<sup>^{28}</sup>$  The amount of UF<sub>6</sub> enriched up to 60% U-235 comprises 160.1 kg of UF<sub>6</sub> that was collected in UF<sub>6</sub> product cylinders and 6.5 kg of UF<sub>6</sub> that was accumulated and discharged from the HEU dump cold traps during this reporting period.

<sup>&</sup>lt;sup>29</sup> The Agency has verified all 432.3 kg of UF<sub>6</sub> enriched up to 60% U-235 that has been produced since 21 November 2022.

 $<sup>^{30}</sup>$  Out of the overall production of UF<sub>6</sub> enriched up to 20% U-235 at FFEP since 16 February 2021, the Agency has verified 1155.4 kg of UF<sub>6</sub> enriched up to 20% U-235.

<sup>&</sup>lt;sup>31</sup> Since 23 February 2021, as the Agency has only been able to verify Iran's production of enriched UF<sub>6</sub> 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 UF<sub>6</sub> enriched up to 5% U-235 at FEP since 16 February 2021, the Agency has verified 19 537.2 kg of UF<sub>6</sub> enriched up to 5% U-235.

<sup>&</sup>lt;sup>32</sup> The amount of UF<sub>6</sub> 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.

- 19.2 kg of UF<sub>6</sub> enriched up to 60% U-235 were produced in R&D production lines 4 and 6;<sup>33</sup>
- 439.1 kg of UF<sub>6</sub> enriched up to 5% U-235 were fed into cascades installed in R&D production lines 4, 5 and 6;
- 166.6 kg of UF<sub>6</sub> enriched up to 5% U-235 were produced in R&D production line 5;
- 76.6 kg of UF<sub>6</sub> enriched up to 5% U-235 were produced in Hall A1000, R&D lines A, B and C and R&D production lines D, E, Q and R;
- 200.1 kg of UF<sub>6</sub> enriched up to 2% U-235 were produced in R&D lines 1, 2 and 3; and
- 253.3 kg of UF<sub>6</sub> enriched up to 2% U-235 were accumulated as tails from R&D production line 5
- 26. Since 16 February 2021, the Agency has not been able to verify Iran's total enriched uranium stockpile<sup>34</sup> 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 17 May 2025, Iran's total enriched uranium stockpile was 9247.6 kg. This figure represents an increase of 953.2 kg since the previous quarterly report. The estimated stockpile comprised: 8413.3 kg of uranium in the form of UF<sub>6</sub>; 619.6 kg of uranium in the form of uranium oxide and other intermediate products; 71.0 kg of uranium in fuel assemblies, plates and rods; 4.4 kg of uranium in targets; and 139.3 kg of uranium in liquid and solid scrap.
- 27. As of 17 May 2025, the Agency has estimated that the total enriched uranium stockpile in the form of UF<sub>6</sub> of 8413.3 kg comprised:
  - 2221.4 kg of uranium enriched up to 2% U-235 (-705.6 kg since the previous quarterly report);
  - 5508.8 kg of uranium enriched up to 5% U-235 (+1853.4 kg);
  - 274.5 kg of uranium enriched up to 20% U-235 (-332.3 kg); and
  - 408.6 kg of uranium enriched up to 60% U-235 (+133.8 kg). 35,36
- 28. As of 17 May 2025, the Agency verified that the inventory of uranium enriched up to 20% U-235 in forms other than UF<sub>6</sub> was 60.6 kg, consisting of 45.5 kg of uranium in fuel assemblies,<sup>37</sup> plates and rods, 2.8 kg of uranium in targets, 6.5 kg of uranium in other intermediate products, and 5.8 kg of uranium in liquid and solid scrap.

<sup>&</sup>lt;sup>33</sup> The Agency has verified all 235.5 kg of UF<sub>6</sub> enriched up to 60% U-235 that has been produced at PFEP since 14 April 2021.

<sup>&</sup>lt;sup>34</sup> Comprising enriched uranium produced at FEP, PFEP and FFEP and used as feed material at PFEP and FFEP.

 $<sup>^{35}</sup>$  During this reporting period, 12.3 kg of UF<sub>6</sub> (8.3 kg of uranium) with an enrichment level close to 5% U-235 was mixed with HEU dump material at FFEP (already included in the stockpile of uranium enriched up to 60% U-235), resulting in a cylinder of UF<sub>6</sub> with an enrichment level between 20% and 60% U-235. This amount of 8.3 kg of uranium is therefore now included in the stockpile of uranium enriched up to 60% U-235.

<sup>&</sup>lt;sup>36</sup> A small amount of UF<sub>6</sub> with an enrichment level between 20% and 60% U-235 is generated from the mixing, at PFEP, of UF<sub>6</sub> with an enrichment level close to 20% U-235 and UF<sub>6</sub> with an enrichment level close to 60% U-235 during homogenization and sampling. This amount is not included in the stockpile.

<sup>&</sup>lt;sup>37</sup> During the reporting period, eight fresh fuel assemblies containing 11.4 kg of uranium and 18 plates containing 1.4 kg of uranium enriched up to 20% U-235 were produced for use at the Tehran Research Reactor, 3.5 kg of uranium enriched up to 20% U-235 in the form of partially fabricated fuel items was received from the Russian Federation (see para. 21) and the dose rate of one irradiated test fuel assembly, containing 0.55 kg of uranium enriched up to 20% U-235, was measured and found to be below the level established by the Joint Commission under the JCPOA not to count against the enriched uranium stockpile.

29. As of 17 May 2025, the inventory of uranium enriched up to 60% U-235 in forms other than UF<sub>6</sub> remains 2.0 kg of uranium as previously reported, consisting of 1.6 kg of uranium in irradiated targets,<sup>38</sup> verified at TRR on 17 May 2025, and 0.4 kg of uranium in liquid and solid scrap, verified at FPFP on 17 May 2025.

# D. Summary

- 30. 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.
- 31. 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 more than four years.
- 32. 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.
- 33. It has also been more than 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.
- 34. The significantly increased production and accumulation of highly enriched uranium by Iran, the only non-nuclear-weapon State to produce such nuclear material, is of serious concern.
- 35. The Director General will continue to report as appropriate.

<sup>&</sup>lt;sup>38</sup> Irradiated at TRR and stored in the reactor pool.

Annex I

Enriched UF<sub>6</sub> Feed, Production and Inventory since the Director General's previous Quarterly Report

Facility	Centrifuge Type	Feed Enrichment Level (% U-235)	Quantity Fed (kgUF <sub>6</sub> )	Product Enrichment Level (% U-235)	Quantity Produced (kgUF <sub>6</sub> )
FFEP	IR-1	<5%	441.8	<20%	68.0
				<2%	368.7
	IR-6	Natural, Depleted	-	<5%	229.1
			7.50.0	<60%	166.6
		<20%	560.3	<5%	396.9
	Combined dump			<5%	98.5
FEP	IR-1				2671.3
	IR-2m	Natural	1867.3	<5%	
	IR-4	<2%			
	IR-6				
PFEP	IR-4 (Line 4) and IR-6 (Line 6)	<5%	439.1	<60%	19.2
	IR-4 and IR-6 (Line 5)	Tails from Line 6	N/A	<5%	166.6
				<2%	253.3
	Various (Lines 1, 2 and 3)	Natural	_	<2%	200.1
	Hall A1000: Various (Lines A, B and C), IR-6 (Line D) and IR-2m (Line E)	Natural, Depleted	_	<5%	76.6

Enrichment level (% U-235)	Inventory as at 8 February 2025 (kgU)	Quantity Fed (kgU)	Quantity Produced (kgU)	Inventory as at 17 May 2025 (kgU)
<2%	2927.0	1260.4	554.9	2221.4
<5%	3655.4	594.6	2456.3	5508.8 <sup>39</sup>
<20%	606.8	378.2	45.9	274.5
<60%	274.8		125.4	408.640

<sup>&</sup>lt;sup>39</sup> See footnote 35.

<sup>&</sup>lt;sup>40</sup> See footnote 35.

# **Annex II**

## List of acronyms

AEOI Atomic Energy Organization of Iran

DIQ Design Information Questionnaire

DIV Design Information Verification

EUPP Enriched UO<sub>2</sub> 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