

**IAEA**

Atoms for Peace and Development

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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

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) in relation to its enrichment-related activities. It provides an update on developments since the Director General's previous reports.¹

Activities Related to Enrichment

2. On 5 May 2021, Iran provided the Agency with an updated design information questionnaire (DIQ) for the Pilot Fuel Enrichment Plant (PFEP) at Natanz. The updated DIQ described another mode for the production of UF₆ enriched up to 60% U-235,² in addition to the three modes described in the updated DIQ of 13 April 2021.³

3. The fourth mode for the production of UF₆ enriched up to 60% U-235 at PFEP described in the updated DIQ of 5 May 2021 involves: feeding UF₆ enriched up to 5% U-235 into the cascade of IR-6 centrifuges in research and development (R&D) line 6 to produce UF₆ enriched up to 60% U-235; feeding the tails produced from this cascade into the cascade of IR-4 centrifuges in R&D line 4 to

¹ GOV/2021/10, GOV/INF/2021/17, GOV/INF/2021/19, GOV/INF/2021/20, GOV/INF/2021/21, GOV/INF/2021/22, GOV/INF/2021/23, GOV/INF/2021/24, GOV/INF/2021/26, GOV/INF/2021/27 and GOV/INF/2021/28.

² JCPOA, 'Annex I – Nuclear-related measures', para. 28.

³ GOV/INF/2021/22, para. 3.

produce UF₆ enriched up to 20% U-235; and feeding the tails produced from this cascade into the cascade of IR-5 and IR-6s centrifuges in R&D line 1⁴ to produce UF₆ enriched up to 5% U-235.

4. On 10 May 2021, the Agency verified at PFEP that Iran was producing UF₆ enriched up to 60% U-235 in R&D line 6, UF₆ enriched up to 20% U-235 in R&D line 4 and UF₆ enriched up to 5% U-235 in R&D line 1, containing 27 IR-5 centrifuges and 30 IR-6s centrifuges, using the mode of production described in paragraph 3 above.

5. As previously reported, following the start of production of UF₆ enriched up to 60% U-235 at PFEP on 17 April 2021, Iran declared to the Agency that the enrichment level of the UF₆ produced at PFEP was 55.3% U-235, and on the same date the Agency took a sample of the produced UF₆ for destructive analysis (DA) to independently verify the enrichment level declared by Iran.⁵

6. As also previously reported, after Iran had changed the mode of production, Iran declared that the enrichment levels of the UF₆ samples it had taken from R&D lines 6 and 4 on 20 April 2021 were 59.6% U-235 and 20.3% U-235, respectively.⁶ However, according to Iran, fluctuations of the enrichment levels of UF₆ were experienced for both product streams from R&D lines 6 and 4. On 22 April 2021, the Agency took environmental samples (ES) from the product sampling point at PFEP.⁷

7. The Agency's analysis of the DA sample taken at PFEP on 17 April 2021, shows an enrichment level consistent with that declared by Iran. The Agency's analysis of the ES taken on 22 April 2021 shows an enrichment level of up to 63% U-235, which is consistent with the fluctuations of the enrichment levels of UF₆ referred to in paragraph 6 above.

⁴ GOV/2021/10, para. 33.

⁵ GOV/INF/2021/26, para. 3.

⁶ GOV/INF/2021/28, para. 3.

⁷ GOV/INF/2021/28, para. 4.