

## Analysis of Status of Iran's Compliance with the Joint Plan of Action

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The International Atomic Energy Agency (IAEA) has just released its monthly report on the status of Iran's commitment under the interim agreement of the Joint Plan of Action (JPA). The agreement took effect on January 20, 2014 and this report covers the period up to November 24, 2014.

The report is a summary of Iran fulfilling its commitments under the JPA, most of which have been discussed in earlier reports. Several developments bear highlighting:

- 1) Between January 20, 2014 and November 24, 2014, Iran produced 2,566 kilograms of  $\text{UF}_6$  enriched up to 5% U-235 at its three declared enrichment facilities.
- 2) Iran fed 2,720 kg of  $\text{UF}_6$  enriched up to 5% U-235 into the conversion process at the Enriched  $\text{UO}_2$  Powder Plant (EUPP) for conversion into uranium oxide. However, the amount of low enriched uranium (LEU) oxide powder exiting from the conversion lines was not supplied in the report, or in the November 2014 quarterly IAEA safeguards report on Iran. How much of this material is in a final oxide form and whether any remains in hexafluoride form in feed tanks to the conversion lines is not known.
- 3) The IAEA confirmed that since July 24, 2014, Iran has used 25.3 kilograms of  $\text{U}_3\text{O}_8$ , converted from  $\text{UF}_6$  enriched up to 20% U-235, for the manufacture of reactor fuel items for the Tehran Research Reactor (TRR). As pointed out in an earlier ISIS [report](#), as of October 2014, out of about 17 kilograms of near 20 percent LEU used in the manufacturing of the fuel, only about five kilograms actually ended up in TRR fuel assemblies. This small of a fraction of LEU in TRR fuel assemblies is problematic, since much of the leftover LEU can be recovered and reused.
- 4) The IAEA report was silent on the issue of Iran recently enriching in the IR-5 centrifuge at the Pilot Fuel Enrichment Plant (PFEP) at Natanz. Following this revelation, the United States asked Iran to stop enriching in the IR-5, and according to the United States, Iran agreed to do so. But the IAEA report does not provide any information on whether Iran actually stopped enriching in the IR-5 by November 24. It remains unclear whether this was an official, albeit temporary, violation of the JPA, simply against the spirit of the agreement, or represents a loophole that requires fixing. Nonetheless, the United States and its P5+1 partners need to clarify with Iran the terms of centrifuge research and development at the PFEP and elsewhere.

Overall, Iran has complied with the JPA on its nuclear-related obligations during the past nearly one year of observing the agreement. It may have engaged in a temporary violation, however, as the controversial issue of enrichment in the previously non-enriching IR-5 showed. Moreover, the end state of some of Iran's obligations need clarification. For example, should Iran have ended up with 25 kilograms of near 20 percent LEU in TRR fuel? Or is this the amount of material Iran committed to use in the manufacturing process regardless of how much ended up in fuel assemblies? These questions require public clarification.