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IAEA Inspection Reports Mostly Bad News

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EXECUTIVE SUMMARY: The latest IAEA inspection reports on Iran show a continued escalation in a wide array of nuclear activities prohibited by the JCPOA, including accumulation of enriched uranium in quantities that exceed the limits set in the agreement as well as increasing levels of enrichment. Moreover, the reports complain that the Iranian regime is constantly hindering the Agency's verification measures, leading to an ever more significant decline in its ability to ascertain and report on the details of Iran's nuclear activities. The IAEA's access, already limited, was further curtailed on June 24, when temporary agreements reached by the Agency with Iran expired. In the background is the victory of Ebrahim Raisi in the Iranian presidential election and the ascendance of a more extremist government than that of Rouhani.

On June 9, the International Atomic Energy Agency (IAEA) released a series of reports by the Secretary General dated April and May 2021 on Iran's nuclear activities. Most are short notifications about Iran's increasing use of advanced centrifuges and increasing levels of enrichment, both of which are prohibited by the JCPOA.

The most important of the reports issued is the detailed quarterly report, dated May 31, which discusses all aspects of Iran's nuclear program with special emphasis on uranium enrichment activities and facilities. It shows that while the production of low enriched uranium at the Natanz FEP (fuel enrichment plant) appears to have been curtailed by about half—probably due to the "accident" in early April—most of Iran's other activities are increasingly worrying.

Iran's current stock of low enriched uranium at the 5% level is almost 1,800 kilograms, about six times the 300 kilograms allowed by the JCPOA and

slightly above the 3.67% enrichment level that it permits. In addition, there are another 1,300+ kilograms of uranium enriched to the 2% level. While that might seem insignificant on the face of it, it brings Iran's total quantity of enriched uranium to more than 3,200 kilograms, or more than 10 times what is allowed by the JCPOA.

It is true that the 1,800 kilograms of 5% enriched uranium are only about a sixth of the quantity that was in Iran's possession on the eve of the implementation of the JCPOA in 2015, but this is not particularly reassuring. At the Natanz facility, the Iranians are in the process of installing and deploying for use more and more advanced centrifuges, the IR-2m and the IR-4, for the enrichment of uranium. This activity is not permitted by the JCPOA during the first 10 years' duration of the agreement; i.e., until 2026 (this is in addition to replacing damaged IR-1 centrifuges, which is allowed).

There is more mostly bad news about the PFEP (Iran's above-ground pilot fuel enrichment plant), which was not affected by the April incident. At that facility, the Iranians are using advanced IR-4 and IR-6 centrifuges to enrich uranium to the 60% level. The quantity enriched so far is only about two kilograms, which is not yet significant *per se*—but this activity is prohibited by the JCPOA for the first 10 years other than for R&D.

It would appear that at least in its first phase, this step was taken as a provocation in response to the sabotage at the FEP, as well as to increase pressure on the Biden administration in the ongoing negotiations to hurry up and capitulate to Iranian demands before the situation worsens. The 60% level is very near the level of highly enriched uranium (HEU) required for nuclear weapons, and is therefore alarming.

The Fordow facility (FFEP, or Fordow Fuel Enrichment Plant), which is located inside a mountain on an IRGC military reservation, is continuing to produce 20% enriched uranium (as well as 5% enriched uranium). According to the report, Iran has produced about 60 kilograms of 20% enriched uranium so far (current to May 24; since then more may have been produced). This would be about a fifth the quantity in Iran's possession on the eve of the October 2013 Joint Plan of Action (JPA) interim agreement, in which Iran agreed to cease enrichment to the 20% level and dispose of its existing stockpile. It did both in the ensuing months, using about half to produce fuel plates for the Tehran Research Reactor (TRR) and downblending the other half into natural uranium oxides.

The accumulation of significant stocks of 20% enriched uranium is an ominous milestone on Iran's path to producing highly enriched uranium

(HEU) for weapons. Moreover, it should be noted that the Fordow facility was allowed by the JCPOA to continue operations with the explicit understanding and stipulation that it no longer be used to enrich uranium, and that the small number of IR-1 centrifuges allowed to remain would be converted to civilian use with Russian assistance.

The Fordow facility is now using prohibited types of centrifuges to engage in prohibited enrichment to prohibited levels. The fact that Fordow was allowed by the JCPOA to continue to exist rather than be closed down and dismantled is telling. It is now clear why Iran insisted on its preservation as an indispensable part of the agreement.

Another disconcerting aspect of the IAEA report is the theme of frustration, and the long list of substantive complaints, about Iran's increasing undermining of verification, transparency, and access, and its evasiveness at providing the Agency with information requested regarding suspect sites. The latter was always part of the IAEA's quarterly reports, but this is now extending to more and more sites, including those that were previously accessible to Agency's IAEA inspectors.

Iran is also increasing its restrictions on the ongoing monitoring of the enrichment facilities in such a way that the IAEA is reduced to estimating the quantities of the various stockpiles of enriched uranium. The report states that at this stage it is confident that these estimates are reliable as they correlate with verified findings, but intimates that this may not be the case in the future.

Over the past three months, Iran has increasingly restricted IAEA access, and the temporary extensions (or what remained of them) expired on June 24. The IAEA's verification access is so eroded that it is becoming essentially worthless. At the Agency, work is ongoing to agree with Iran to an arrangement that will facilitate some kind of continued access in parallel to the continuing negotiations to renew adherence to the JCPOA.

It is not clear what position the new government in Tehran will take after the installation of the new president, Ebrahim Raisi, and his government, which will take place on August 3. There is no doubt that it will be more radical than Rouhani's and more in line with the extremist position of the Supreme Leader, the IRGC, and the other hard-line factions of the regime. It will be interesting to see whether Russia and the European partners to the JCPOA are able to successfully exert pressure on Iran to at least continue to enable IAEA monitoring of some of the crucial elements of the nuclear program, such as uranium enrichment.

The bottom line is the question of how far Iran now is from the ability to manufacture its first nuclear weapon.

According to the Washington-based Institute for Science and International Security, a worst-case analysis would put Iran at two to three months from the capacity (given that a decision to do so has been made) to produce enough weapons grade highly enriched uranium (HEU) for a nuclear weapon. the Institute assesses that had the April incident not taken place, Iran would be less than two months away from this capacity.

But the Institute emphasizes that this is a worst-case scenario, and that most assessments are less dire. Still, Iran is evidently, barring a return to the JCPOA commitments, moving forward toward a nuclear weapon relatively swiftly and with determination, and will continue to do so unless other events like the April incident slow it down. The coming months will inevitably see a series of crises in which the Biden administration, the new Israeli government, important Western European leaders, and perhaps others on the regional or international scene will be heavily invested.

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