



The Iranian Nuclear Archive: Implications and Recommendations

By David Albright, Olli Heinonen¹, and Andrea Stricker

February 25, 2019

An unappreciated development over the last year was Israel's seizure in Tehran of significant portions of a "Nuclear Archive" that contained tens of thousands of files and CDs relating to Iran's past efforts at nuclear weapon design, development, and manufacturing. It is now apparent that the archive is extremely rich in new information about Iran's substantial, rapidly advancing nuclear weapons effort in the early 2000s, which it codenamed the "Amad Plan." Iran aimed to develop and manufacture five 10 kiloton nuclear weapons, develop and build a missile suitable to deliver them, and to be prepared to carry out an underground nuclear test. The archive documentation supports that rather than ending the Amad program in late 2003, Iran reoriented it to a more disguised, albeit smaller, nuclear weapons program.

After several months of study including the publication of more than six detailed technical reports available on our web sites, researchers at the Institute for Science and International Security and the Foundation for the Defense of Democracies have shown that there is a wealth of new information on Iran's nuclear weapons program in the archive and that this program was more developed than Western governments understood prior to the discovery of the archive. Moreover, this new information in the archive indicates that Iran might still be in breach of its nuclear nonproliferation undertakings.

More importantly, the archive information is in a form that is actionable in terms of: better carrying out inspections of Iran's nuclear activities; challenging Iran's prior incomplete and duplicitous statements about its nuclear weapons programs; more adequately understanding the threat Iran's nuclear programs pose today and in the future; and better designing policies to address this issue. The archive also highlights the need to fix the shortcomings in the Iran nuclear deal, or Joint Comprehensive Plan of Action (JCPOA), in terms of inspections, the end of nuclear limitations or "sunsets," and Iran's continued work on nuclear-capable ballistic and cruise missiles. It supports replacing the nuclear deal with a more comprehensive, long-lasting approach aimed at blocking Iran's latent pathway to nuclear weapons.

The information in the archive confirms and adds significantly to documentation gathered over many years by the International Atomic Energy Agency (IAEA) from member states and its own

¹ Olli Heinonen is Former Deputy Director General of the IAEA and head of its Department of Safeguards. He is a Senior Advisor on Science and Nonproliferation at the Foundation for Defense of Democracies.

investigations. It suggests that the IAEA and the U.S. intelligence community, as exemplified by the 2007 U.S. National Intelligence Estimate, underestimated the extent of Iran's post-2003 nuclear weapons work. The archive materials suggest that Iran can produce deliverable nuclear weapons more quickly than earlier assessed.

Moreover, the Amad Plan reflected decisions taken at the time by Iran's highest security officials, including now President Hassan Rouhani and Iran's current National Security Advisor Ali Shamkhani. Amir Ali Hajizadeh, the current commander of the Iran Revolutionary Guards Corps (IRGC) Aerospace Force, was an important player in the Amad program. Their continuity in high-level positions is a sobering reminder that key Iranian personnel involved in the Amad program have remained highly influential in the oversight of activities critical to maintaining a capability to make and deliver nuclear weapons.

The archive also includes minutes of detailed internal Iranian discussions about next steps after the Amad Plan. Faced with intrusive IAEA inspections exposing secret fuel cycle sites, as well as a growing diplomatic push by the E3 (Britain, France, and Germany), and fearful of a US invasion after the fall of Baghdad, Iran decided in the summer and fall of 2003 to downsize its nuclear weapons program, in particular to halt the Amad Plan and restructure it. The archive shows that Iran decided to reorient and conceal parts of its nuclear weapons program, but not to end them. The new information in the Iranian atomic archive provides a more complete picture of the transformation of the Amad program into successor activities, which were intended to allow Iran to continue to pursue key nuclear weapons-related work that had no plausible civilian justification in a more covert, dispersed manner. The information in the archive suggests that the nuclear weapons program never ended – and it could be continuing today.

It should be noted that as of today, the IAEA has been unable to answer the fundamental question about the status of Iran's nuclear weapons program: do some activities continue? This absence of an answer is exemplified in its regular quarterly reports on the verification and monitoring of the JCPOA. For example, this oft-missed problem is in the IAEA's November 2018 report: "Evaluations regarding the absence of undeclared nuclear material and activities for Iran remained on-going." The IAEA has not yet been able to certify that Iran's nuclear program is truly peaceful. Worsening the situation, the structure of the JCPOA and United Nations Security Council Resolution 2231 disincentivized Iran from cooperating with the IAEA to finish such an evaluation. For example, UN embargoes on conventional arms and ballistic missiles and additional sanctions sunset even if the IAEA does not reach a conclusion that Iran's nuclear program is peaceful.

There is considerable information in the archive that shows that Iran deceived the IAEA and the international community about its nuclear weapons activities throughout the 2000s and provided incomplete and misleading declarations. There are actually "deception folders" in the archive that catalogue Iran's lies to inspectors, to enable it to be consistent from meeting to meeting.

The archive contains information about significant nuclear facilities not previously known to the IAEA and Western intelligence agencies. For example, the archive reveals for the first time the “Shahid Boroujerdi project,” which was a plan for an underground facility intended to build components of highly enriched uranium cores for nuclear warheads.

Post-Amad Plan, Iran reoriented some prior military nuclear sites to civilian ones, such as the Gchine mine and mill, and eventually, after its exposure in 2009, the Fordow uranium enrichment site. However, Iran’s intention was not to turn the program into a strictly peaceful one; rather, the archive materials show that Tehran sought to preserve its nuclear weapons capabilities for the future. Unanswered remains the question of these activities’ status today.

The archive contains many images of sensitive equipment vital to a nuclear weapons program, including that related to high explosive tests carried out at the Parchin military complex. Where is this equipment now? It could contribute to an on-going or future nuclear weapons program. Moreover, some of this equipment is controlled by an anti-nuclear weaponization provision of the JCPOA, called Section T. Its use even in non-proscribed activities would be a violation of this provision.

The existence and maintenance of an archive related to nuclear weapon design and manufacturing is not compatible with Iran’s legally binding nuclear nonproliferation commitments. It is difficult to see how storing and curating an extensive nuclear weapons archive focused on developing and building missile-deliverable nuclear weapons is consistent with Iran’s pledge under the JCPOA that under no circumstances will it ever seek nuclear weapons. Moreover, Iran failed to provide required design information on facilities it built, dismantled, or had under construction. There are also indications that Iran might have been undertaking activities involving nuclear material and did not report them to the IAEA. Overall, the new information raises fundamental doubts about whether Iran is complying with its comprehensive safeguards agreement, the associated Additional Protocol, the JCPOA, and even the Nuclear Non-Proliferation Treaty.

The new information derived from the Iranian Nuclear Archive adds more urgency to efforts to: create a full correct and complete history of Iran’s nuclear weapons efforts; obtain answers from Iran about the fate of the equipment, material, technology, and personnel discussed in the archive; and more broadly, to characterize the Amad Plan and its successor programs.

Iran may have had and still may have until now undeclared nuclear activities. It is therefore essential that the IAEA Board of Governors requests the Secretariat to verify the existence of the documents in the archive, their contents, and related equipment to ensure that all nuclear material and activities have indeed been declared to the IAEA, and all non-peaceful activities have been terminated and relevant capabilities dismantled.

The IAEA should be asked to verify sites, locations, facilities, documentation, equipment, and materials mentioned in the archive, question personnel involved, and report on that work. Iran should be urged to cooperate fully in these investigations.

A call rooted in past denuclearization practice is for Iran to destroy or render harmless, under IAEA supervision, its nuclear weapons archive, in particular nuclear weapons-related designs, materials, documents, and single nuclear-weapon use equipment. To do so would follow well-established international precedent where nuclear weapons documents and key equipment have existed and been destroyed in denuclearizing states such as Libya and South Africa. This was also done in the case where Switzerland came into the possession of such information during an investigation and prosecution of nuclear traffickers working for A.Q. Khan.

The revelations from the archive should motivate the United States and its allies to push harder to fix the flaws in the Iran nuclear deal or reach a replacement agreement. Iran will be well positioned to make nuclear weapons at a time of its choosing once the nuclear deal limitations end, and could also make them much more quickly than the world previously assessed. It is critical that the international community reach a new nuclear agreement that can replace or supplement the JCPOA and fix its weaknesses in terms of sunsets, inspections, and nuclear-capable ballistic and cruise missiles.