

Inspecting Parchin and Beyond

By Olli Heinonen, August 2015

Inspections at Parchin are again in the limelight. Questions and concerns have been raised over whether the International Atomic Energy Agency (IAEA) is getting the requisite physical access to the site to collect meaningful information. These questions are salient since Parchin—where the IAEA has long had questions about high-explosive work connected to the possible military dimensions (PMDs) of Iran’s nuclear program and subsequently, about the years of sanitization carried out at the base—will likely become the standard for access given to other military and suspect sites under the Joint Comprehensive Plan of Action (JCPOA).

THE INSPECTION PROCESS

The IAEA has been taking environmental samples in Iran since the 1990’s. Environmental sampling involves a range of procedures—from “swipe” samples, to collection of soil, and occasionally also vegetation. In some cases in Iran, swipe sampling did not turn up evidence in renovated/sanitized locales that were later determined to be areas where the Iranians conducted nuclear work. It required a combination of environmental sampling methods plus additional information derived from other sources, including the IAEA’s own observations and conversations with Iranian officials, in order for inspectors to piece together information that confirmed nuclear work had been conducted in sanitized areas, as well as some enrichment in R&D locations in Tehran and elsewhere.

IAEA inspectors must collect environmental samples in ways that will shed light on whether there have been suspicious or undeclared activities at a particular site. They need to collect intentionally in spots where sanitization—removal of traces of radioactive materials through extensive decontamination—may have not been completed thoroughly. ***Inspectors must ensure the chain of verification: from sample-taking that must include the physical presence of IAEA inspectors where the collection was done through shipment***, which also must be under continuous monitoring by the IAEA.

Environmental sampling is often required at highly sensitive locations. For most cases, the IAEA uses “managed access,” a process included in the Additional Protocol.¹ Managed access is not a barrier to inspectors or an invitation for others to do the inspectors’ work. It is an inspection modality, an arrangement where an operator can, inter alia, legitimately shroud some equipment with the understanding that independent sample-taking or other examinations will not be compromised.

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1. International Atomic Energy Agency, “Model Protocol to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards,” INFCIRC/540, Article 7. (<https://www.iaea.org/sites/default/files/infcirc540.pdf>)

HOW THIS RELATES TO PARCHIN

Parchin is obviously a case where suspicions are high and the effectiveness of inspections in doubt owing to the heavy sanitization that has taken place over the past years.

When the IAEA takes samples at Parchin, the assumption is that the inspection standards will not be compromised. Samples taken need to be representative of the object sampled. For example, the surface sampled should not be covered with extra layers of painting or lacquer. The first step is to verify the physical structure of the suspected object. In the Parchin case, this is the PMD-related vessel, equipment associated with it, and the building surrounding them. Such a verification activity requires IAEA inspectors to examine features in order to establish dimensions and structural materials, which can then be used to design the final sampling plan. The fact that the IAEA believes that Parchin contains a chamber that has been used for small-scale hydrodynamic tests requires the IAEA to establish all of the relevant facts. This necessitates a human and professional element in assessing the “feel” of the place. Remote camera monitoring in this case simply cannot replace precise and independent visual inspection.

It is also not taboo for the IAEA to access military sites in Iran. On a few occasions since 2003, the IAEA, after negotiations, visited a number of military-related installations in the Islamic Republic. The IAEA identified equipment and materials, and took environmental samples. Visits were carried out at Kohladouz,² Lavisanshian,³ Parchin,⁴ and other military-related workshops and R&D locations.⁵ In each of these cases, environmental samples were taken by inspectors, in person, following the IAEA standard sample-taking procedures.

Much of the current concerns arise from the reported arrangements worked out between the IAEA and Iran in the side documents to address PMD issues. If the reporting is accurate, these procedures appear to be risky, departing significantly from well-established and proven safeguards practices. At a broader level, if verification standards have been diluted for Parchin (or elsewhere) and limits imposed, ***the ramification is significant as it will affect the IAEA’s ability to draw definitive conclusions with the requisite level of assurances and without undue hampering of the verification process.***

Parchin and the PMD issues, given their relevance to understanding how far Iran has gone towards designing a nuclear weapon and its impact on overall safeguards, mean that confidence in IAEA verification cannot be set at a lower bar than accepted in the past. The fact is that under the JCPOA, the Islamic Republic retains a sizable nuclear infrastructure with a uranium-enrichment

2. International Atomic Energy Agency, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” November 15, 2004, GOV/2004/83, paragraph 97. (<https://www.iaea.org/sites/default/files/gov2004-83.pdf>)

3. Ibid., paragraph 99.

4. International Atomic Energy Agency, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” November 18, 2005, GOV/2005/87, paragraph 16. (<https://www.iaea.org/sites/default/files/gov2005-87.pdf>)

5. International Atomic Energy Agency, “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” June 1, 2004, GOV/2004/34, paragraph 18. (<https://www.iaea.org/sites/default/files/gov2004-34.pdf>)

program exceeding its practical needs. In other words, *Iran remains a nuclear threshold state with a breakout time of about a year for the first ten years if the JCPOA is fully implemented.* Furthermore, Iran remains in non-compliance with its non-proliferation undertakings. This makes it all the more important that the IAEA is able to establish a credible baseline to ensure that Iran has halted its PMD activities and is able to monitor and provide early warning if such activities resume.

If the parts of the leaked document and statements about Iranian sample taking at Parchin are correct, it raises questions that must be answered. Inspections are at the heart of the IAEA's work, and the IAEA must have the opportunity to explain its decisions concerning Iran. At this stage, the said document has been judged within the IAEA to be too sensitive for public comment. The Agency Secretariat has decided against sharing it with its governing Board. But partial truths can be dangerous. The issue of confidentiality is an important matter for the IAEA. However, it should not be used as a blanket to stop legitimate questions, particularly regarding verification methods at Parchin. *Historically, the IAEA has not viewed such issues as confidential. The IAEA and its member states have disclosed much more detailed facility-specific approaches at regular safeguards symposia.* Additionally, in 2007 the IAEA Iran Work Plan⁶ addressing outstanding issues, accumulated over several years, was made available to all IAEA member states, and the Board also received a 2012 document from Iran related to very specific PMD questions,⁷ which happened while the IAEA was negotiating with Iran for greater clarity and access.

The best way forward will be for the IAEA and Iran, with support from the United States, to seek the release of the document in question and provide explanations for the concerns raised about the Parchin process.

BEYOND PARCHIN

In 2008 the IAEA introduced PMD-related questions.⁸ It sought answers to outstanding, unresolved issues, without which the Agency cannot provide assurances about undeclared nuclear material and activities in Iran. Parchin is an important aspect, but only one of several PMD concerns that Iran needs to explain forthrightly. Parchin could well end up as the yardstick for whether or not Western countries are serious about PMD issues in the future, not just the past.

We need to be aware of the likely ramifications of remote sampling—samples taken by individuals other than designated IAEA inspectors—if this indeed is the plan for Parchin. This approach

6. International Atomic Energy Agency, "Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions 1737 (2006) and 1747 (2007) in the Islamic Republic of Iran, August 30, 2007, Attachment. Title of report amended on September 7, 2007, GOV/2007/48/Corr.1. (original <https://www.iaea.org/sites/default/files/gov2007-48.pdf>, corrected title <https://www.iaea.org/sites/default/files/gov2007-48c1.pdf>)

7. International Atomic Energy Agency, "Communication Dated 2 March 2012 Received from the Permanent Mission of Islamic Republic of Iran," March 2, 2012, GOV/INF/2012/4. (<http://www.isisnucleariran.org/assets/pdf/gov-inf-2012-4.pdf>)

8. International Atomic Energy Agency, "Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions 1737 (2006), 1747 (2007) and 1803 (2008) in the Islamic Republic of Iran," May 26, 2008, GOV/2008/15. (<https://www.iaea.org/sites/default/files/gov2008-15.pdf>)

creates a precedent not only for other military installations or sites with proprietary or sensitive information in Iran, but also for other countries. Equally important, many other verification questions arise: for example, what is considered to be a military installation in Iran, and in other countries? Does the IAEA get to make this designation or the country under observation? And what does this mean for the future of IAEA verification?

To be clear, addressing Parchin and PMD issues is not a matter of forcing a confession from Iran on whether a nuclear-weapons program existed. But the IAEA does have a job, critical to the efficacy and the legitimacy to the JCPOA, to certify that Iran's nuclear program remains purely peaceful. For this reason, *no technical or security issue can remain out of bounds for the IAEA lest this dilute or compromise the integrity of the organization's verification efforts.*

The Iran Task Force's goal is to lend expertise on Iran's internal politics, nuclear science, and sanctions regime to the legislative branch. By providing the necessary intellectual capital, this group can help to strengthen Congress's role in a potential final nuclear agreement with Iran. This group of former government officials and nuclear, legal, and sanctions experts provides advice and recommendations to policymakers in order to ensure that any final deal prevents Iran's uranium and plutonium pathways to a nuclear weapon.