



IAEA Visit to the Parchin Site

By David Albright, Olli Heinonen,¹ and Serena Kelleher-Vergantini

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On September 21, 2015, International Atomic Energy Agency (IAEA) Director General Yukiya Amano informed the Board of Governors that one day earlier he had visited a suspect site within the Parchin Military Complex in Iran. A few days prior to Director General Amano's visit, as foreseen in an unofficial draft Iran/IAEA agreement,² Iran, under IAEA inspectors' direction but not physical presence, took environmental samples at the suspect location. Amano said in a public statement that access to the site was important in order to "clarify issues related to possible military dimensions to Iran's nuclear program."³ The building is suspected of being the location of tests involving work on nuclear weapons that were conducted several years ago. Iran has denied IAEA access to this specific site in the northern part of the military complex since access was first requested in 2011. Subsequently, it extensively modified the site.⁴ Thus, IAEA access to the site is a step in the right direction. In addition to an examination of the characteristics of the building and any equipment inside it, the taking of environmental samples plays a key role in IAEA investigations to establish the nature of any experiments or tests, and whether uranium, or its surrogate materials such as tungsten, were present. However, the manner in which environmental samples were taken raises troubling precedents for both the IAEA's investigation into Iran's past work on nuclear weapons and the verifiability of the long term nuclear deal, the Joint Comprehensive Plan of Action (JCPOA).

The IAEA did not reveal any specific details of the sampling arrangement, whereby the IAEA directed the taking of environmental samples inside the key building of interest or possibly at other locations at the site. It is known that the process of taking samples was videotaped by the Iranians with IAEA direction and control. However, the media reporting was unclear regarding whether the video taping was done in real-time, i.e. with a live feed to IAEA inspectors located elsewhere, or was accomplished by the Iranians and the digital files then given to the inspectors for analysis, review, and subsequent action, which could have involved additional videotaping. In this case, the inspectors may have first received videos taken

¹ Olli Heinonen is a Senior Fellow at the Belfer Center for Science and International Affairs and former Deputy Director of Safeguards at the International Atomic Energy Agency.

² "Text of draft agreement between IAEA, Iran," Associated Press, August 20, 2015, <http://bigstory.ap.org/article/bedd428e26924eed95c5ceaec72d3a4/text-draft-agreement-between-iaea-iran>.

³ "IAEA Director General's Remarks to the Press on Visit to Iran," September 21, 2015, <https://www.iaea.org/newscenter/statements/iaea-director-generals-remarks-press-visit-iran>.

⁴ For more information about the Parchin site, see: David Albright, Serena Kelleher-Vergantini, and Christopher Coughlin, "Modifications at the Parchin Site: A Comprehensive Timeline; New Imagery Suggests Re-Asphalting," February 11, 2015, <http://isis-online.org/isis-reports/detail/modifications-at-the-parchin-site-a-comprehensive-timeline-new-imagery-sugg/8#images>; David Albright and Serena Kelleher-Vergantini, "Renewed Activity at the Parchin Site in Iran," August 5, 2015, http://isis-online.org/uploads/isis-reports/documents/Renewed_Activity_at_Parchin_August_4_2015_FINAL.pdf; David Albright, Serena Kelleher-Vergantini, and Andrea Stricker, "Satellite Imagery Does Not Support Iranian Road Work Claim at Parchin," August 7, 2015, http://isis-online.org/uploads/isis-reports/documents/Satellite_Imagery_Does_Not_Support_Iranian_Road_Work_Claim_at_Parchin_Final.pdf; David Albright and Serena Kelleher-Vergantini, "Parchin Site Update and Debate," September 11, 2015, http://www.isis-online.org/uploads/isis-reports/documents/Revisiting_Parchin_September_11_2015_Final.pdf.

inside the suspect building. After reviewing the videos, the inspectors would have instructed the Iranians where to take the samples, a process also videotaped by the Iranians. Afterwards, the Iranians would have presented the new videos and samples to the IAEA. However, what actually happened remains unknown publicly.

Nonetheless, IAEA inspectors were **not** physically present when the Iranians took the environmental samples in the suspect building. This is confirmed by Amano's public statement: *"We entered a building which the Agency [IAEA] had previously only been able to observe using satellite imagery."* This absence of IAEA inspectors inside the building is what several members of Congress and the Associated Press referenced in their statements and reporting, albeit sometimes in more general terms.

Director General Amano reported, *"Inside the building, we saw indications of recent renovation work. There was no equipment in the building. Our experts will now analyse this information and we will have discussions with Iran in the coming weeks, as foreseen in the Road-map."* The Iranians apparently have emptied and renovated the inside of the building. The IAEA reported that, based on evidence in its possession, the building contained a relatively large high explosive chamber made from metal and concrete. This chamber was visibly absent during Amano's visit. Earlier commercial satellite imagery from 2012 showed water flowing along the ground near the suspect building. Given that the suspect building is now empty, a reasonable conclusion is that the water could have been related to cooling the equipment used to cut up the chamber inside the suspect building. Such cutting can generate a considerable amount of heat which must be removed, and this is often done with water. After the chamber is dismantled and cut-up, the removal of the pieces of the chamber could be carried out in a manner that would not be visible in satellite imagery.

Amano added, *"As I have stated in my reports to the Board, the extensive work that has been conducted at the location since early 2012 undermines the Agency's ability to conduct effective verification there."* Such extensive modifications, which could have involved the replacement of internal walls, ceilings, and floors, would make it very challenging to detect uranium traces related to past work on nuclear weapons and in particular to associate any uranium found to past nuclear weapons work.

Amano stated: *"As a result of experience gained over the years, the Agency has, in certain circumstances, permitted States' representatives to carry out activities in support of the Agency's verification work. This is done in a way that ensures that the Agency's verification processes are not compromised. In the case of Parchin, the Iranian side played a part in the sample-taking process by swiping samples. The Agency can confirm the integrity of the sampling process and the authenticity of the samples, which were taken at places of interest to the Agency at the particular location in Parchin."*

However, the IAEA has offered little substantive, specific support for these statements. For example, it is well known that samples are taken inside highly radioactive hot cells by the facility operator using remote manipulators, but the inspectors are physically present the entire time next to the operator and control where and how to sample, ensuring that the samples are representative and that they identify any alterations possibly done to the objects sampled. Similarly, a country's technicians have taken swipe samples inside plutonium glove-boxes under inspector supervision and guidance. But again this is necessitated by the highly radioactive environment encountered by inspectors and the need to use specialized equipment or procedures to ensure safety and health requirements. And the inspectors were not kept out of the room where the operator was taking the samples, as in the case of Parchin. Moreover, there are no radioactive hazards inside the suspect building at the Parchin site.

Director General Amano also discussed the custody of the samples, and the unofficial Iran/IAEA draft agreement published by the Associated Press⁵ would support that the IAEA would have monitored the custody of the samples from when they were taken until later when Iran gave them to the IAEA. However, again the more important issue is the sample taking itself. Videotaping alone is unlikely to ensure that the samples are representative or that weaknesses were identified in the modifications inside the building. The physical presence of trained, experienced inspectors, with the ability to investigate the building or site up close, is critical to detecting the best places to sample, particularly in the case of a country that has a history of violating its safeguards obligations.

What is sometimes lost in this discussion is that the suspect Parchin site is not a nuclear laboratory in a university or a civil plutonium handling facility in Japan or France. The IAEA needs to clarify serious allegations about Iran's work on high explosives relating to nuclear weapons development, in a situation which has far reaching non-proliferation implications. Parchin is also not a test bed for new uses of video equipment, other instruments, or new procedures. Instead, the inspection arrangements require a cohesive attempt to find out if the nuclear weapons allegations are true. Thus the methods have to be sound and based on the strongest IAEA inspection and sampling procedures available.

It is difficult to have confidence in any sampling result if the IAEA is unable to fully investigate the suspect location and adjacent site and then decide how best to conduct environmental sampling or other verification activities in order to defeat any Iranian attempts to hide uranium or other evidence. The taking of samples by Iran, while a clever idea allowing it to stick to the fiction of never allowing inspectors to have access to sensitive military sites, also undermines the IAEA's credibility. It risks missing an important chance to determine what occurred at Parchin, part of the important overall investigation the IAEA is conducting into the possible military dimensions issue before U.N. and national sanctions on Iran can be removed.

This approach also creates dangerous precedents, whether or not uranium is found, as we highlighted in a previous [report](#). It sets a precedent for limiting IAEA sample taking and possibly access to other sites at Parchin or additional military facilities this fall as the IAEA seeks to resolve its concerns about Iran's alleged work on nuclear weapons. What happens if a new issue arises and the IAEA again needs access to a site within the Parchin Military Complex? Would the same type of agreement apply here as well? Iran could also try to insist on the same type of sampling and one-time access arrangement at the other sites associated with the IAEA's investigation of past military nuclear activities.

After Implementation Day of the JCPOA, Iran could also use this Parchin precedent to demand a similar approach to environmental sampling if the IAEA requests access to a suspect military site. Although most would argue that Iran would not be justified in invoking this method after Implementation Day, Iran could nonetheless demand this arrangement. It would not be the first time Iran pushed the envelope of what is allowed under agreements. In a confrontation over access to a suspect military site, Iran could insist on this method and seek to gain the support of Europeans in any vote over enforcement of access under the JCPOA. To win, Iran would need to convince only one of the E3 (Britain, France, and Germany) to take its side, assuming that Russia and China would likely side with Iran. These countries would face a very difficult trade-off: accepting Iran's demands, which the IAEA accepted in the highly controversial Parchin case, or lose growing and potentially lucrative business in Iran if the issue appeared to be leading the deal toward an impasse over access and inspections arrangements and the snapping back of sanctions. Moreover, according to the JCPOA, Iran has stated that if sanctions are reinstated, it will treat that as grounds to cease performing its commitments under the JCPOA. Thus, a

⁵ "Text of draft agreement between IAEA, Iran," Associated Press, August 20, 2015, <http://bigstory.ap.org/article/bedd428e26924eed95c5ceaec72d3a4/text-draft-agreement-between-iaea-iran>.

snapback may end the deal. The pressure to accept an inspection arrangement that was viewed as acceptable by the E3 earlier could overwhelm a U.S. push for adequate inspection arrangements.

The Parchin agreement undermines arguments that the verification standards of implementing and carrying out the JCPOA will be as or more rigorous than other non-proliferation agreements. A major question is why the IAEA was not permitted to use the access rights implemented in 2005 at Parchin when inspectors visited the Parchin site twice. On those visits to Parchin, the inspectors were permitted, on short notice, to enter any building requested, and the inspectors could take samples as they deemed necessary and without any restrictions. The Iranians observed the inspectors taking the samples, as is normal practice absent over-riding health and safety concerns.

We remain concerned that the Parchin agreement could be a presage of the undermining of the IAEA's ability by its December 15, 2015 deadline to adequately address its concerns about past and possibly on-going Iranian work related to nuclear weapons. Later, the precedent of the Parchin deal could weaken the IAEA's ability to verify the JCPOA.

For all of these reasons, the IAEA needs to demonstrate during the next months as the JCPOA is implemented that it can access Iranian sites of concern, including military sites, and conduct effective verification into the allegations of Iran's past nuclear weapons work. It should release the Parchin agreement and associated procedures to member states, followed by gaining access to the other, known sites associated with past nuclear weapons work and interviewing key scientists and engineers linked to those efforts. With the relatively weak start posed by the Parchin case, the IAEA's priority should be strengthening verification and transparency measures from now onwards.