Iran's Nuclear Activities:

What Might the IAEA Learn?

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Brief Analysis

Satellite photos published last week showed two sites in Iran that might house a civilian energy program and/or a nuclear weapons program. To determine exactly what purpose these sites serve would require an on-site inspection. Yet, inspections performed by international regulatory agencies are bound by certain limitations. What are the chances that the International Atomic Energy Agency (IAEA), the organization responsible for verifying compliance to the Nuclear Nonproliferation Treaty (NPT), will detect clandestine nuclear activities in these two sites or elsewhere in Iran?

Iran's Status As a Signatory to the NPT

When Iran signed the NPT in 1970, it agreed, as a nonnuclear weapons state (NNWS), to refrain from acquiring any nuclear weapons capabilities. Iran does have the right to acquire nuclear technology for peaceful uses, including the establishment of a full nuclear fuel cycle to process fuel for nuclear power plants. Yet, because such capabilities could also be used for nuclear weapons, Iran, as an NNWS, had to sign a "full-scope safeguards agreement" with the IAEA. Such agreements are designed to cover the entire range of fuel-cycle activities in NNWSs.

Nothing is more misleading than the notion that a full-scope safeguards agreement actually covers all of a state's nuclear activities. Rather, the agreement verifies only the nondiversion of nuclear materials from declared peaceful nuclear activities (e.g., energy production, medical research, agriculture) to proscribed weapons activities. The failure of full-scope safeguards agreements to detect undeclared activities became clear after the Gulf War, when it was revealed that the IAEA was unaware of a well-funded ($10-15 billion) and well-staffed (about 20,000 personnel) clandestine Iraqi program aimed at the production of a small arsenal of nuclear weapons.

Currently, the IAEA has the same limited inspection rights in Iran that it had in Iraq prior to the Gulf War. Hence, the agency has the right to inspect only declared sites -- and, within those sites, only those areas with declared activities that involve special fissionable material (uranium 233 and 235; plutonium). To understand the limitations inherent in this arrangement, consider what the IAEA discovered after the Gulf War about the al-Tuwaitha site in Iraq, which it had been inspecting for years. Dimitri Perricos, the head of the IAEA inspection team in Iraq, said,

"To our surprise, Tuwaitha was a very, very large center. It was not just the three or four buildings that safeguards inspectors had visited before the war -- the two reactors, a small storage facility, and a small laboratory-scale fabrication plant. We found that there was a whole, new area of Tuwaitha where safeguards inspectors had never been before. It was in this area, called the new R&D area, where Iraq did most of its clandestine development work."

Iran Refuses to Accept the IAEA's Post-Iraq Reforms

In the years following the discovery of Iraq's clandestine nuclear weapons program, the IAEA adopted a new safeguards approach aimed at uncovering undeclared as well as declared activities. The new program, called 93+2, consists of two parts. Part I reaffirms measures that were already under the IAEA's legal authority but had not been executed. For example, if Iran had adopted these provisions, it would be obligated to report any new nuclear

installations 180 days before the start of construction work (rather than 180 days before the first introduction of nuclear materials, as provided for in Iran's current agreement with the IAEA), which would give the IAEA an early warning indication of new nuclear activities, installations, and sites. All NNWSs should have adopted these provisions into their existing full-scope safeguards agreements immediately. According to the IAEA's recent safeguards implementation report, however, Iran is the only state that has failed to do so.

Parallel to Program 93+2's Part I provisions (covering sites declared by states as containing nuclear materials), the IAEA also developed Part II provisions (collectively known as the Additional Protocol) in order to address the problem of undeclared sites. In postwar Iraq, for example, the IAEA found thirty sites where nuclear activities were taking place, even though only one site (al-Tuwaitha) had been declared as containing nuclear materials. The Additional Protocol covers all of a country's nuclear fuel cycle activities (whether or not they involve nuclear materials) and strengthens the agency's detection capabilities regarding undeclared activities. Unfortunately, Iran has refused to adopt it.

The IAEA has announced plans to visit the two new nuclear sites in Iran. This visit would be the fifth in a series. In 1991, Iran voluntarily invited the IAEA to visit any location within the country to verify the absence of undeclared nuclear activities. In response, the agency has visited Iran four times to observe some of the country's nuclear sites, declared and undeclared. These visits did not constitute "special" or "unannounced" inspections, however; they were coordinated with Iran in advance and thus were very limited in their effectiveness. The coordination included agreement on the timing, on the sites to be visited, and on the equipment to be used during the visits. Moreover, to avoid an atmosphere of mistrust, the IAEA refused to use Global Positioning System equipment, which would have ensured that the Iranians took the inspectors to the exact sites that they had asked to visit. Iran has used these visits to its advantage, eliciting "no findings" statements from the IAEA and then claiming that they constitute clean bills of health, even though the visits provided no basis for any such declaration.

Given Iran's vast territory (three times the size of France, more than twice the size of Texas), undeclared activities could be conducted anywhere, including in the desert or underground. Even the new technical measures included in the Additional Protocol provide only limited detection capabilities. For example, wide-area environmental sampling techniques can detect traces of small enrichment activities at a maximum distance of approximately thirty kilometers, depending on weather conditions; hence, the technique is insufficient, since it could cover only a small part of Iran's territory.

What the IAEA Should Do

Despite the limitations of Iran's existing safeguards agreement, the IAEA should put forth maximal effort toward fulfilling its mandate. The agency can take several steps:

Continue to exert pressure on Iran to allow visits to suspect sites. In conducting such visits, the agency should use the full authority and technical measures at its disposal.

Abandon its traditional "don't rock the boat" culture and instead encourage inspectors to hunt for inconsistencies, smoking guns, and smokescreens. Inspectors should be praised for reporting any problem, even if it is politically embarrassing; to be effective, they must search for violations rather than confirm compliance.

Carefully explain what is meant by a "no findings" report. The absence of proof is not the proof of absence; "no findings" does not mean that the agency has certified a country to be free of undeclared activities. Nor should a "no findings" report be seen as indicating a failed mission; only repeated inspections in both declared and undeclared sites can improve international confidence about what is occurring in the target country.

Demand sufficient resources to fulfill its growing tasks. The IAEA's budget has not been increased for the last fifteen years, even though its responsibilities have expanded. If the budget remains at the present level, the IAEA should

shift its current nondiscriminatory verification policy -- which is based on the principle of not singling out any country -- and direct the necessary resources toward problematic states.

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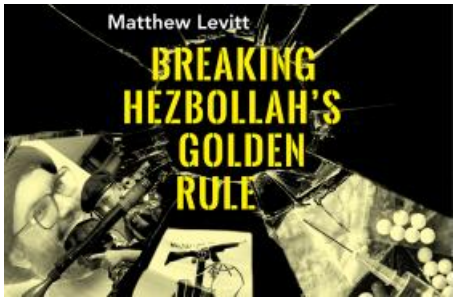

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