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Iran's Nuclear Program: Tehran's Compliance with International Obligations

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Summary

Several U.N. Security Council resolutions adopted between 2006 and 2010 required Iran to cooperate fully with the International Atomic Energy Agency's (IAEA's) investigation of its nuclear activities, suspend its uranium enrichment program, suspend its construction of a heavy-water reactor and related projects, and ratify the Additional Protocol to its IAEA safeguards agreement. Iran did not comply with most of the resolutions' provisions. However, Tehran has implemented various restrictions on, and provided the IAEA with additional information about, its nuclear program pursuant to the July 2015 Joint Comprehensive Plan of Action (JCPOA), which Tehran concluded with China, France, Germany, Russia, the United Kingdom, and the United States. On the JCPOA's Implementation Day, which took place on January 16, 2016, all of the previous resolutions' requirements were terminated. The nuclear Nonproliferation Treaty (NPT) and U.N. Security Council Resolution 2231, which the Council adopted on July 20, 2015, compose the current legal framework governing Iran's nuclear program. Iran has complied with the JCPOA and resolution.

Iran and the IAEA agreed in August 2007 on a work plan to clarify outstanding questions regarding Tehran's nuclear program. The IAEA had essentially resolved most of these issues, but for several years the agency still had questions concerning "possible military dimensions to Iran's nuclear programme." A December 2, 2015, report to the IAEA Board of Governors from agency Director General Yukiya Amano contains the IAEA's "final assessment on the resolution" of the outstanding issues.

This report provides a brief overview of Iran's nuclear program and describes the legal basis for the actions taken by the IAEA board and the Security Council. It will be updated as events warrant.

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Introduction

Iran ratified the nuclear Nonproliferation Treaty (NPT) in 1970. Article III of the treaty requires nonnuclear-weapon states-parties[1] to accept comprehensive International Atomic Energy Agency (IAEA) safeguards; Tehran concluded a comprehensive safeguards agreement with the IAEA in 1974.[2] In 2002, the agency began investigating allegations that Iran had conducted clandestine nuclear activities; the IAEA ultimately reported that some of these activities had violated Tehran's safeguards agreement. Following more than three years of investigation, the IAEA Board of Governors referred the matter to the U.N. Security Council in February 2006. Since then, the council adopted six resolutions requiring Iran to take steps to alleviate international concerns about its nuclear program. This report provides a brief overview of Iran's nuclear program and describes the legal basis for the actions taken by the IAEA board and the Security Council.

For more detailed information about Iran's nuclear program, see CRS Report RL34544, *Iran's Nuclear Program: Status*, by Paul K. Kerr. For more information about the July 2015 Joint Comprehensive Plan of Action (JCPOA) concerning Iran's nuclear program, see CRS Report R43333, *Iran Nuclear Agreement*, by Kenneth Katzman and Paul K. Kerr.

Background

Iran's nuclear program has generated widespread concern that Tehran is pursuing nuclear weapons. Tehran's construction of gas centrifuge uranium enrichment facilities has been the main source of proliferation concern. Gas centrifuges enrich uranium by spinning uranium hexafluoride gas at high speeds to increase the concentration of the uranium-235 isotope. Such centrifuges can produce both low-enriched uranium (LEU), which can be used in nuclear power reactors, and highly enriched uranium (HEU), which is one of the two types of fissile material used in nuclear weapons. HEU can also be used as fuel in certain types of nuclear reactors. Iran also has a uranium conversion facility, which converts uranium oxide into several compounds, including uranium hexafluoride. Tehran claims that it wants to produce LEU for its current and future power reactors.

Iran's construction of a reactor moderated by heavy water has also been a source of concern. Although Tehran says that the reactor, which Iran is building at Arak, is intended for the production of medical isotopes, it was a proliferation concern because the reactor's spent fuel would have contained plutonium well-suited for use in nuclear weapons. In order to be used in nuclear weapons, however, plutonium must be separated from the spent fuel—a procedure called "reprocessing." Iran has said that it will not engage in reprocessing. Pursuant to the Joint Comprehensive Plan of Action (JCPOA), which Iran concluded in July 2015 with China, France, Germany, Russia, the United Kingdom, and the United States (collectively known as the "P5+1"), Tehran has rendered the Arak reactor's original core inoperable. Iran has also begun to fulfill a JCPOA requirement to redesign and rebuild the Arak reactor based on a design agreed to by the P5+1 so that it will not produce weapons-grade plutonium. The agreement also requires Iran to export the spent fuel from this reactor and all other nuclear reactors.

[1] The NPT defines a nuclear-weapon state as "one which has manufactured and exploded a nuclear weapon or other nuclear explosive device" prior to January 1, 1967. These states are China, France, Russia, the United Kingdom, and the United States.

[2] INFCIRC/214.

Iran and the IAEA agreed in August 2007 on a work plan to clarify the outstanding questions regarding Tehran's nuclear program.[3] Most of these questions, which had contributed to suspicions that Iran had been pursuing a nuclear weapons program, were subsequently resolved. Then-IAEA Director General Mohamed ElBaradei, however, told the IAEA board June 2, 2008, that there was "one remaining major [unresolved] issue," which concerns questions regarding "possible military dimensions to Iran's nuclear programme."[4] The IAEA agency did not make any substantive progress on these matters for some time.

Tehran has questioned the authenticity of some of the evidence underlying the agency's concerns and maintains that it has not done any work on nuclear weapons.[5] Iran also expressed concern to the IAEA that resolving some of these issues would require agency inspectors to have "access to sensitive information related to its conventional military and missile related activities." The IAEA, according to a September 2008 report from ElBaradei, stated its willingness to discuss with Iran

> modalities that could enable Iran to demonstrate credibly that the activities referred to in the documentation are not nuclear related, as Iran asserts, while protecting sensitive information related to its conventional military activities.[6]

Indeed, the agency made several specific proposals, but Tehran did not provide the requested information.[7]

The IAEA Board of Governors adopted a resolution on November 18, 2011, stating that "it is essential" for Iran and the IAEA "to intensify their dialogue aiming at the urgent resolution of all outstanding substantive issues." IAEA and Iranian officials met 10 times between January 2012 and May 2013 to discuss what the agency termed a "structured approach to the clarification of all outstanding issues related to Iran's nuclear programme."[8] However, during an October 2013 meeting, IAEA officials and their Iranian counterparts decided to adopt a "new approach" to resolving these issues. Iran signed a joint statement with the IAEA on November 11, 2013, describing a "Framework for Cooperation." According to the statement, Iran and the IAEA agreed to "strengthen their cooperation and dialogue aimed at ensuring the exclusively peaceful nature of Iran's nuclear programme through the resolution of all outstanding issues that have not already been resolved by the IAEA." Iran subsequently provided the agency with information about several of the outstanding issues. Iran later agreed in May 2014 to provide information to the IAEA by August 25, 2014, about five additional issues, including alleged Iranian research on high explosives and "studies made and/or papers published in Iran in relation to neutron transport

[3] The text is available at https://www.iaea.org/sites/default/files/publications/documents/infcircs/2007/infcirc711.pdf.

[4] *Introductory Statement to the Board of Governors*, IAEA Director General Dr. Mohamed ElBaradei, June 2, 2008.

[5] See, for example, *Communication Dated 7 January 2016 Received from the Permanent Mission of the Islamic Republic of Iran to the Agency Regarding the Report of the Director General on the Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme*, INFCIRC/893, January 8, 2016.

[6] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions 1737 (2006), 1747 (2007), 1803 (2008) and 1835 (2008) in the Islamic Republic of Iran*, Report by the Director General, GOV/2008/38, September 15, 2008.

[7] See, for example, *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, Report by the Director General, GOV/2012/23, May 25, 2012.

[8] A September 2012 IAEA Board of Governors resolution reiterated the board's support for the Agency's negotiations with Tehran, and stated that "Iranian cooperation with IAEA requests aimed at the resolution of all outstanding issues is essential and urgent in order to restore international confidence in the exclusively peaceful nature of Iran's nuclear programme."

and associated modelling and calculations and their alleged application to compressed materials." Iran subsequently provided information about four of these issues.[9]

According to the JCPOA, Iran was to "complete" a series of steps set out in an Iran-IAEA "Roadmap for Clarification of Past and Present Outstanding Issues." According to IAEA Director General Yukiya Amano, this road map set out "a process" under a November 24, 2013, Joint Plan of Action between Iran and the P5+1, "to enable the Agency, with the cooperation of Iran, to make an assessment of issues relating to possible military dimensions to Iran's nuclear programme."[10] According to a December 2, 2015, report from Amano to the IAEA Board of Governors, "[a]ll the activities contained in the road-map were implemented in accordance with the agreed schedule."[11] The road map required Amano to present this report, which contains the agency's "final assessment on the resolution" of the aforementioned outstanding issues.

In response, the board adopted a resolution on December 15, 2015, that notes Iran's cooperation with the road map and "further notes that this closes the Board's consideration" of the "outstanding issues regarding Iran's nuclear programme."[12] Since the IAEA has verified that Iran has taken the steps required for Implementation Day to take effect, the board is no longer focused on Iran's compliance with past Security Council resolutions and past issues concerning Iran's safeguards agreement. Instead, the board is focused on monitoring and verifying Iran's JCPOA implementation "in light of" United Nations Security Council Resolution 2231, which the Council adopted on July 20, 2015. This latter resolution requests the IAEA Director General "to undertake the necessary verification and monitoring of Iran's nuclear-related commitments for the full duration of those commitments under the JCPOA."

The December 2015 IAEA resolution requests the Director General to issue quarterly reports to the board regarding Iran's "implementation of its relevant commitments under the JCPOA for the full duration of those commitments." The Director General is also to report to the Board of Governors and the Security Council "at any time if the Director General has reasonable grounds to believe there is an issue of concern" regarding Tehran's compliance with its JCPOA or safeguards obligations. The JCPOA and Resolution 2231 also contain a variety of reporting provisions for the IAEA. For example, the resolution requests the agency's Director General

> to provide regular updates to the IAEA Board of Governors and, as appropriate, in parallel to the Security Council on Iran's implementation of its commitments under the JCPOA and also to report to the IAEA Board of Governors and in parallel to the Security Council at any time if the Director General has reasonable grounds to believe there is an issue of concern directly affecting fulfilment of JCPOA commitments.

Several U.N. Security Council Resolutions required Iran to cooperate fully with the IAEA's investigation of its nuclear activities, suspend its uranium enrichment program, suspend its construction of a heavy-water reactor and related projects, and ratify the Additional Protocol to its IAEA safeguards agreement.[13] Tehran has signed, but not ratified, its Additional Protocol. Resolution 1929, which the council adopted in June 2010, contains these requirements and also

[9] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran,* Report by the Director General, GOV/2015/34, May 29, 2015.

[10] For more information about the Joint Plan of Action and the JCPOA, see CRS Report R43333, *Iran Nuclear Agreement,* by Kenneth Katzman and Paul K. Kerr.

[11] *Final Assessment on Past and Present Outstanding Issues Regarding Iran's Nuclear Programme*, GOV/2015/68, December 2, 2015.

[12] *Joint Comprehensive Plan of Action Implementation and Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015),* GOV/2015/72, December 15, 2015.

[13] Iran has a plant for producing heavy water.

required Tehran to refrain from "any activity related to ballistic missiles capable of delivering nuclear weapons." Iran has also continued its extensive ballistic missile program. Resolution 1929 also required Iran to comply with the modified Code 3.1 of its subsidiary arrangements. (See "Potential Noncompliance After September 2005.") Iran did not take any of these steps prior to concluding the JCPOA, but did limit and reverse some aspects of its nuclear program since the government began implementing the November 2013 Joint Plan of Action. Moreover, pursuant to the Joint Plan of Action and its November 2013 agreement with the IAEA, Iran provided some information to the agency required by the modified Code 3.1.

Pursuant to the JCPOA, Tehran has since implemented additional restrictions on its uranium enrichment program and heavy-water reactor program, as well as begun implementing its additional protocol and the modified Code 3.1. On the JCPOA's Implementation Day, which took place on January 16, 2016, all of the previous Security Council resolutions' requirements were terminated pursuant to U.N. Security Council Resolution 2231, which along with the NPT, composes the current legal framework governing Iran's nuclear program.[14] Although the IAEA reports findings of its inspection and monitoring activities and the JCPOA-established Joint Commission monitors the parties' implementation of the agreement, compliance determinations are national decisions. "Iran continued to adhere" to its JCPOA commitments during 2017, according to an April 2018 State Department report covering that period.[15] Until July 2019, All official reports and statements from the United Nations, European Union, the IAEA, and the non-U.S. participating governments also indicated that Iran has complied with the JCPOA and related Resolution 2231 requirements.[16] [17]

According to two July reports from IAEA Director General Amano, Iran has violated two JCPOA-mandated restrictions on its nuclear program.[18] Both the quantity of Iran's LEU stockpile, as well as that LEU's uranium-235 content, currently exceed JCPOA-mandated limits. Whether this action constitutes noncompliance with the JCPOA is unclear. In a May 8, 2019, speech, Iranian President Hassan Rouhani cited JCPOA Paragraph 26 as grounds for reducing the government's performance of some Iranian commitments pursuant to the agreement. According to that paragraph,

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[14] "Joint Statement by EU High Representative Federica Mogherini and Iranian Foreign Minister Javad Zarif," January 16, 2016.

[15] *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments,* Department of State, April 2018.

[16] Iran's stock of heavy water has exceeded the JCPOA-required limit of 130 metric tons on two occasions since the P5+1 began implementing the agreement. "In both instances, this issue was resolved after Iran shipped out sufficient amounts of material to get back under the limit," the State Department reported in April 2017 (*Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments,* Department of State, April 2017). For more information, see CRS Report R43333, *Iran Nuclear Agreement* and CRS Report RL34544, *Iran's Nuclear Program: Status,* by Paul K. Kerr.

[17] According to a May 31, 2019 report from IAEA Director General Amano, Iran had conducted research and development using advanced centrifuges; the number of these centrifuges may have exceeded the number permitted by the JCPOA. In a June 11, 2019, speech to the IAEA Board of Governors, U.S. Ambassador Jackie Wolcott stated that this activity has violated the JCPOA. However, no JCPOA participating government appears to have issued a similar public finding. Moreover, EU High Representative Mogherini stated during a June 17 press conference that "Iran is still compliant" with the JCPOA (Remarks by High Representative/Vice-President Federica Mogherini at the press conference following the Foreign Affairs Council, June 16, 2019).

[18] *Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015),* Report by the Director General, GOV/INF/2019/8. July 1, 2019; *Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution* 2231 (2015), Report by the Director General, GOV/INF/2019/9, July 8, 2019.

> Iran has stated that it will treat such a re-introduction or re-imposition of the sanctions specified in Annex II, or such an imposition of new nuclear-related sanctions, as grounds to cease performing its commitments under this JCPOA in whole or in part.

None of the remaining JCPOA participants have determined that these Iranian actions constitute "'significant' non-compliance," EU High Representative Federica Mogherini stated on July 15.[19]According to the U.S. government, "under the terms of the JCPOA, Iran may cease performing commitments in whole or in part following the U.S. re-imposition of sanctions."[20]

A May 2019 report from Amano states that the IAEA has continued verification and monitoring of the restrictions described in Section T of the JCPOA, which prohibits a number of nuclear weapons-related activities.[21] The agreement, as noted, describes arrangements for agency inspectors to gain access to Iranian sites, including military sites, other than those that Tehran has declared to the agency, "if the IAEA has concerns regarding undeclared nuclear materials or activities, or activities inconsistent with" the JCPOA. The agreement also provides for alternative means to clarify the matter. The IAEA has not reported whether it has requested access to any Iranian military facilities, but the agency has a number of methods other than inspections, such as analyzing open-source information and receiving intelligence briefings from governments, to monitor Iranian compliance with these and other JCPOA commitments. According to the April 2018 State Department report

> [t]he IAEA continues to exercise its full authorities in pursuing any new safeguards-relevant or JCPOA-related information in Iran, including any new concerns regarding weaponization should they arise, through implementation of Iran's Safeguards Agreement, Additional Protocol, and the enhanced transparency and verification measures contained in the JCPOA.[22]

There are no apparent disputes between Iran and the IAEA with respect to Iranian cooperation with the agency. Amano noted in an October 2, 2018, statement that the IAEA has been able to access "all the sites and locations in Iran which" agency inspectors "needed to visit." Similarly, Amano's May 2019 states that the IAEA "has conducted complementary accesses under the Additional Protocol to all the sites and locations in Iran which it needed to visit."[23]

Iran and the IAEA

As noted, Iran is a party to the NPT and has concluded a comprehensive safeguards agreement with the agency. Such agreements are designed to enable the IAEA to detect the diversion of nuclear material from peaceful purposes to nuclear weapons uses, as well as to detect undeclared nuclear activities and material.[24] Safeguards include agency inspections and monitoring of

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[19] "Remarks by High Representative/Vice- President Federica Mogherini following the Foreign Affairs Council," July 15, 2019.

[20] Email from State Department official, July 17, 2019.

[21] *Verification and Monitoring in the Islamic Republic of Iran in Light of United Nations Security Council Resolution 2231 (2015)*, Report by the Director General, GOV/2019/21, May 31, 2019.

[22] Department of State, April 2018.

[23] GOV/2019/21. CRS analyst interview with State Department official, March 5, 2019.

[24] *2001 IAEA Safeguards Glossary*. (Available at http://www-pub.iaea.org/books/IAEABooks/6570/IAEA-Safeguards-Glossary-2001-Edition). Comprehensive safeguards agreements are based on a model described in INFCIRC 153, available at http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc153.pdf. According to Amano's May 2013 report, the IAEA Board of Governors "has confirmed on numerous occasions, since as early as 1992," that this model agreement "authorizes and requires the Agency to seek to verify both the non-diversion of nuclear material from declared activities (i.e. correctness) and the absence of undeclared nuclear activities in the State (i.e. completeness)."

declared nuclear facilities. Although comprehensive safeguards agreements give the IAEA the authority "to verify the absence of undeclared nuclear material and activities, the tools available to it to do so, under such agreements, are limited," according to the agency.[25]

As a practical matter, the IAEA's ability to inspect and monitor nuclear facilities, as well as obtain information, in a particular country pursuant to that government's comprehensive safeguards agreement is limited to facilities and activities that have been declared by the government.[26] Additional Protocols to IAEA comprehensive safeguards agreements increase the agency's ability to investigate undeclared nuclear facilities and activities by increasing the IAEA's authority to inspect certain nuclear-related facilities and demand information from member states.[27] Iran signed such a protocol in December 2003 and agreed to implement the agreement pending ratification. Tehran stopped adhering to its Additional Protocol in 2006.[28]

The IAEA's authority to investigate nuclear-weapons-related activity is limited. Then Director General ElBaradei explained in a 2005 interview that the IAEA does not have "an all-encompassing mandate to look for every computer study on weaponization. Our mandate is to make sure that all nuclear materials in a country are declared to us."[29] Similarly, a February 2006 report from ElBaradei to the IAEA board stated that "absent some nexus to nuclear material the agency's legal authority to pursue the verification of possible nuclear weapons related activity is limited."[30] There is no requirement that there be any nexus to nuclear material in order for the IAEA to request access to a facility, but there are disagreements among IAEA member states regarding the extent of the agency's rights to access locations where there is no reason to suspect the presence of nuclear material. Such disagreements could play a role if the IAEA Board is required to consider a request for special inspections in Iran or another country (see **Appendix B**). Therefore, the closer the connection between nuclear material and the location in question, the more likely the Board would be to approve such an inspection.

The current public controversy over Iran's nuclear program began in August 2002, when the National Council of Resistance on Iran (NCRI), an Iranian exile group, revealed information during a press conference (some of which later proved to be accurate) that Tehran had built nuclear-related facilities that it had not revealed to the IAEA. The United States had been aware of at least some of these activities, according to knowledgeable former officials.[31] Prior to the NCRI's revelations, the IAEA had expressed concerns that Iran had not been providing the

[25] *Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols,* IAEA Services Series 21, May 2016.

[26] *2001 IAEA Safeguards Glossary.*

[27] Additional Protocols for an individual IAEA member state are based on the agency's Model Additional Protocol (INFCIRC/540), available at http://www.iaea.org/Publications/Documents/Infcircs/1997/infcirc540c.pdf.

[28] Iran announced that it would stop implementing the protocol two days after the IAEA Board of governors adopted a resolution in February 2006 that referred Iran's noncompliance with its IAEA safeguards agreement to the U.N. Security Council. Iran has been implementing the protocol pursuant to the JCPOA.

[29] "Tackling the Nuclear Dilemma: An Interview with IAEA Director-General Mohamed ElBaradei," February 4, 2005, available at http://www.armscontrol.org/act/2005_03/ElBaradei.

[30] *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,* Report by the Director General, GOV/2006/15, February 27, 2006.

[31] Gary Samore, former Senior Director for Nonproliferation and Export Controls on the National Security Council, personal communication June 5, 2008; then-Director of Central Intelligence George J. Tenet, "DCI Remarks on Iraq's WMD Programs," February 5, 2004, available at https://www.cia.gov/news-information/speeches-testimony/2004/tenet_georgetownspeech_02052004.html.

agency with all relevant information about its nuclear programs, but had never found Tehran in violation of its safeguards agreement.

In fall 2002, the IAEA began to investigate Iran's nuclear activities at the sites named by the NCRI; inspectors visited the sites the following February. Adopting its first resolution on the matter in September 2003, the IAEA board called on Tehran to increase its cooperation with the agency's investigation, suspend its uranium enrichment activities, and "unconditionally sign, ratify and fully implement" an Additional Protocol.[32]

In October 2003, Iran concluded a voluntary agreement with France, Germany, and the United Kingdom, collectively known as the "E3," to suspend its enrichment activities, sign and implement an Additional Protocol to its IAEA safeguards agreement, and comply fully with the IAEA's investigation.[33] As a result, the agency's board decided to refrain from referring the matter to the U.N. Security Council. As noted, Tehran signed this Additional Protocol in December 2003, but has never ratified it.[34]

Ultimately, the IAEA's investigation, as well as information Iran provided after the October 2003 agreement, revealed that Iran had engaged in a variety of clandestine nuclear-related activities, some of which violated the country's safeguards agreement (see **Appendix A**). After October 2003, Iran continued some of its enrichment-related activities, but Tehran and the E3 agreed in November 2004 to a more detailed suspension agreement.[35] However, Iran resumed uranium conversion in August 2005 under the leadership of then-President Mahmoud Ahmadinejad, who had been elected two months earlier.

On September 24, 2005, the IAEA Board of Governors adopted a resolution (GOV/2005/77)[36] that, for the first time, found Iran to be in noncompliance with its IAEA safeguards agreement. The board, however, did not refer Iran to the Security Council, choosing instead to give Tehran additional time to comply with the board's demands. The resolution urged Iran

- to implement transparency measures including access to individuals, documentation relating to procurement, dual use equipment, certain military owned workshops, and research and development locations;
- to reestablish full and sustained suspension of all enrichment-related activity;
- to reconsider the construction of the research reactor moderated by heavy water;
- to ratify promptly and implement in full the Additional Protocol; and
- to continue to act in accordance with the provisions of the Additional Protocol.

No international legal obligations required Tehran to take these steps. But ElBaradei's September 2008 report asserted that, without Iranian implementation of such "transparency measures," the IAEA would "not be in a position to progress in its verification of the absence of undeclared nuclear material and activities in Iran."

Iran announced in January 2006 that it would resume research and development on its centrifuges at Natanz. The next month, the IAEA Board of Governors referred Iran's case to the U.N.

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[32] *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, Report by the Director General, GOV/2003/75, November 10, 2003.

[33] The text of the agreement is available at https://fas.org/nuke/guide/iran/uk2005.pdf.

[34] Iran has been implementing the protocol pursuant to the JCPOA.

[35] The text of the agreement is available at https://fas.org/nuke/guide/iran/uk2005.pdf.

[36] Available at http://www.iaea.org/Publications/Documents/Board/2005/gov2005-77.pdf.

Security Council.[37] Tehran announced shortly after that it would stop implementing its Additional Protocol. (For details, see "Iran and the U.N. Security Council" below.)

Potential Noncompliance After September 2005

Iran further scaled back its cooperation with the IAEA in March 2007, when the government told the agency that it would stop complying with a portion of the subsidiary arrangements for its IAEA safeguards agreement.[38] That provision (called the modified code 3.1), to which Iran agreed in February 2003, requires Tehran to provide design information for new nuclear facilities "as soon as the decision to construct, or to authorize construction, of such a facility has been taken, whichever is earlier." Beginning in March 2007, Iran argued that it was only obligated to adhere to the previous notification provisions of its subsidiary arrangements, which required Tehran to provide design information for a new facility 180 days before introducing nuclear material into it.[39]

This decision constituted the basis for Iran's stated rationale for its subsequent refusal to provide the IAEA with some information concerning its nuclear program. For example, Tehran had refused to provide updated design information for the heavy-water reactor under construction at Arak.[40] As part of the November 2013 Joint Plan of Action, Iran submitted this information to the IAEA on February 12, 2014.[41] Similarly, Tehran had refused to provide the IAEA with design information for a reactor that Iran intends to construct at Darkhovin. Although Iran provided the agency with preliminary design information about the Darkhovin reactor in a September 22, 2009, letter, the IAEA requested Tehran to "provide additional clarifications" of the information, according to a November 2009 report.[42] Amano reported in September 2010 that Iran had "provided only limited design information with respect to" the reactor.[43] IAEA reports since 2012 do not appear to address this issue.

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[37] For details on the IAEA's authority to refer noncompliance cases to the Security Council, see "Iran and the U.N. Security Council."

[38] According to the 2001 IAEA Safeguards Glossary, subsidiary arrangements describe the "technical and administrative procedures for specifying how the provisions laid down in a safeguards agreement are to be applied."

[39] During a November 2011 session of the Non-Aligned Movement, Ambassador Ali Asghar Soltanieh, then Iran's Permanent Representative to the IAEA, characterized the modified Code 3.1 as "merely a suggestion" by the IAEA Board of Governors. See "Iran Provides 20 Answers to Clarify Ambiguities about Its Nuclear Program," *Tehran Times*, November 9, 2011.

[40] This lack of information was "having an increasingly adverse impact on the Agency's ability to effectively verify the design of the facility and to implement an effective safeguards approach," according to a May 22, 2013, report from Amano (*Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, Report by the Director General, GOV/2013/27, May 22, 2013). A November 2013 report from Amano explains that the IAEA "needs updated design information as early as possible in order ... to ensure that all possible diversion paths are identified, and appropriate safeguards measures and customized safeguards equipment are put in place." (*Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, Report by the Director General, GOV/2013/56, November 14, 2013. Iran has concluded "a safeguards approach for the reactor" (*Status of Iran's Nuclear Programme in Relation to the Joint Plan of Action*, Report by the Director General, GOV/INF/2015/8, April 20, 2015).

[41] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, Report by the Director General, GOV/2014/10, February 20, 2014.

[42] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions 1737 (2006), 1747 (2007), 1803 (2008) and 1835 (2008) in the Islamic Republic of Iran*, Report by the Director General, GOV/2008/59, November 19, 2008.

[43] *Implementation of the NPT Safeguards Agreement in Relevant Provisions of Security Council Resolutions in the Islamic Republic of Iran*, Report by the Director General, GOV/2010/46, September 6, 2010.

Tehran also argued, based on its March 2007 decision, that its failure to notify the IAEA before September 2009 that it has been constructing a gas-centrifuge uranium enrichment facility, called the Fordow facility, near the city of Qom was consistent with the government's safeguards obligations. Exactly when Iran decided to construct the facility is unclear. Amano reported in May 2012 that the IAEA has requested information from Iran regarding the Fordow construction decision. But Tehran, according to Amano's November 2015 report, has not yet provided all of this information. Subsequent reports from Amano have not addressed the issue.

Both the 2007 decision, which the IAEA asked Iran to "reconsider," and Tehran's refusal to provide the design information appear to be inconsistent with the government's safeguards obligations. Although Article 39 of Iran's safeguards agreement states that the subsidiary arrangements "may be extended or changed by agreement between" Iran and the IAEA, the agreement does not provide for a unilateral modification or suspension of any portion of those arrangements.[44] Moreover, the IAEA legal adviser explained in a March 2009 statement[45] that Tehran's failure to provide design information for the reactors is "inconsistent with" Iran's obligations under its subsidiary arrangements. The adviser, however, added that "it is difficult to conclude that" Tehran's refusal to provide the information "in itself constitutes noncompliance with, or a breach of" Iran's safeguards agreement. Nevertheless, a November 2009 report from ElBaradei described Tehran's failures both to notify the agency of the decision to begin constructing the Fordow facility, as well as to provide the relevant design information in a timely fashion, as "inconsistent with" Iran's safeguards obligations. The report similarly described Iran's delay in providing design information for the Darkhovin reactor.

Iran may also have violated its safeguards agreement if it decided to construct other new nuclear facilities without informing the IAEA. The agency has investigated whether Iran has made such decisions. For example, the IAEA has asked the government for information about Iranian statements that the government is planning to construct new uranium enrichment facilities, is designing a nuclear reactor similar to a research reactor located in Tehran, is producing fuel for four new research reactors, and is planning to construct additional nuclear power reactors. Pursuant to its November 2013 agreement with the IAEA, Iran has provided at least some of this information to the agency.

Iran's March 2007 decision regarding the provision of information to the IAEA also formed the basis for Tehran's refusal until August 2009 to allow agency inspectors to verify design information for the Arak reactor. This action also appeared to be inconsistent with Tehran's safeguards agreement. Article 48 of that agreement states that the IAEA "may send inspectors to facilities to verify the design information provided to the Agency"; in fact, the agency has a "continuing right" to do so, according to a November 2008 report from ElBaradei.[46] Moreover, the legal adviser's statement characterized Iran's refusal to allow IAEA inspectors to verify the Arak reactor's design information as "inconsistent with" Tehran's obligations under its safeguards agreement.[47] IAEA inspectors visited the reactor facility in August 2009 to verify

[44] See also GOV/2007/22, available at http://www.iaea.org/Publications/Documents/Board/2007/gov2007-22.pdf. Security Council Resolution 1929 affirmed that Code 3.1 "cannot be modified nor suspended unilaterally."

[45] "Statement by the Legal Adviser," Meeting of the Board of Governors, March 2009.

[46] GOV/2008/59. Security Council Resolution 1929 affirmed this statement.

[47] Iran stated in an April 2007 letter to the IAEA that, given Tehran's March 2007 decision regarding the subsidiary arrangements to its safeguards agreement, such visits were unjustified.

design information, according to a report ElBaradei issued the same month.[48] Inspectors have visited the facility several more times, according to reports from Amano.

In addition to the lapses described above, Iran's failure to notify the IAEA of its decision to produce enriched uranium containing a maximum of 20% uranium-235 in time for agency inspectors to adjust their safeguards procedures may, according to a February 2010 report from Amano, have violated Iran's IAEA safeguards agreement.[49] Article 45 of that agreement requires that Tehran notify the IAEA "with design information in respect of a modification relevant for safeguards purposes sufficiently in advance for the safeguards procedures to be adjusted when necessary," according to Amano's report, which describes Iran's enrichment decision as "clearly relevant for safeguards purposes."

The IAEA board has neither formally found that any of the Iranian actions described above are in noncompliance with Tehran's safeguards agreement, nor referred these issues to the U.N. Security Council. The IAEA board adopted a resolution on November 27, 2009, that described Iran's failure to notify the agency of the Fordow facility as "inconsistent with" the subsidiary arrangements under Iran's safeguards agreement, but this statement did not constitute a formal finding of noncompliance. A September 13, 2012, IAEA board resolution expressed "serious concern" that Tehran has not complied with the obligations described in IAEA Board of Governors and U.N. Security Council resolutions, but the September resolution did not contain a formal finding of noncompliance.[50]

Iran and the U.N. Security Council

As noted, Iran announced in January 2006 that it would resume research and development on its centrifuges at Natanz. In response, the IAEA board adopted a resolution (GOV/2006/14)[51] on February 4, 2006, referring the matter to the Security Council and reiterating its call for Iran to take the measures specified in the September resolution. Two days later, Tehran announced that it would stop implementing its Additional Protocol.

On March 29, 2006, the U.N. Security Council President issued a statement, which was not legally binding, that called on Iran to "take the steps required" by the February IAEA board resolution. The council subsequently adopted six resolutions concerning Iran's nuclear program: 1696 (July 2006), 1737 (December 2006), 1747 (March 2007), 1803 (March 2008), 1835 (September 2008), and 1929 (June 2010). The second, third, fourth, and sixth resolutions imposed a variety of restrictions on Iran.

Resolution 1696 was the first to place legally binding Security Council requirements on Iran with respect to its nuclear program. That resolution made mandatory the IAEA-demanded suspension and called on Tehran to implement the transparency measures called for by the IAEA board's February 2006 resolution. Resolution 1737 reiterated these requirements but expanded the suspension's scope to include "work on all heavy water-related projects." It is worth noting that the Security Council has acknowledged (in Resolution 1803, for example) Iran's rights under

[48] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions 1737 (2006), 1747 (2007), 1803 (2008) and 1835 (2008) in the Islamic Republic of Iran*, Report by the Director General, GOV/2009/55, August 28, 2009.

[49] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of Security Council Resolutions 1737 (2006), 1747 (2007), 1803 (2008) and 1835 (2008) in the Islamic Republic of Iran*, Report by the Director General, GOV/2010/10, February 18, 2010.

[50] *Implementation of the NPT Safeguards Agreement and Relevant Provisions of United Nations Security Council Resolutions in the Islamic Republic of Iran*, GOV/2012/50, September 13, 2012.

[51] *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, GOV/2006/14, February 4, 2006.

Article IV of the NPT, which states that parties to the treaty have "the inalienable right ... to develop research, production and use of nuclear energy for peaceful Purposes." As noted, Resolution 1929 also required Tehran to refrain from "any activity related to ballistic missiles capable of delivering nuclear weapons" and to comply with the modified Code 3.1 of its subsidiary arrangement.

Resolution 2231, which the U.N. Security Council adopted on July 20, 2015, states that all of the previous resolutions' requirements would be terminated when the council receives a report from the IAEA stating that Iran has implemented the nuclear-related measures by Implementation Day, as described by the July 2015 Joint Comprehensive Plan of Action. As noted, Implementation Day took place on January 16, 2016. Resolution 2231 also "reaffirms that Iran shall cooperate fully as the IAEA requests to be able to resolve all outstanding issues, as identified in IAEA reports." The IAEA Board of Governors' December 2015 resolution noted that the board had closed its consideration of the "outstanding issues regarding Iran's nuclear programme."

The JCPOA spells out a process for Iran or the P5+1 to resolve disputes over alleged breaches of their JCPOA commitments pursuant to the agreement. Both the JCPOA and Resolution 2231 contain a "snap back" mechanism to reimpose sanctions should Iran fail to resolve satisfactorily a P5+1 claim regarding Iranian JCPOA noncompliance. This mechanism provides that any permanent UN Security Council member would be able to veto a Security Council resolution that would preserve U.N. sanctions relief in the event of Iranian noncompliance. The JCPOA specifies that, in such a case, "the provisions of the old U.N. Security Council resolutions would be re-imposed, unless the U.N. Security Council decides otherwise." The other P5+1 states are able to invoke this mechanism, but whether the United States may do so is unclear because Resolution 2231 provides that only a "JCPOA participant state" may bring a noncompliance finding to the Security Council; U.S. officials have stated that the United States is no longer participating in the agreement.

Authority for IAEA and U.N. Security Council Actions

The legal authority for the actions taken by the IAEA Board of Governors and the U.N. Security Council is found in both the IAEA Statute and the U.N. Charter. The following sections discuss the relevant portions of those documents.

IAEA Statute[52]

Two sections of the IAEA Statute explain what the agency should do if an IAEA member state is found to be in noncompliance with its safeguards agreement.[53] Article III B. 4. of the statute states that the IAEA is to submit annual reports to the U.N. General Assembly and, "when appropriate," to the U.N. Security Council. If "there should arise questions that are within the competence of the Security Council," the article adds, the IAEA "shall notify the Security Council, as the organ bearing the main responsibility for the maintenance of international peace and security."

Additionally, Article XII C. states that IAEA inspectors are to report noncompliance issues to the agency's Director General, who is to report the matter to the IAEA Board of Governors. The

[52] The IAEA Statute is not self-executing; the Agency implements safeguards agreements reached with individual governments and certain regional organizations. As noted, comprehensive safeguards agreements are based on a model described in INFCIRC 153.

[53] The text of the IAEA Statute is available at https://www.iaea.org/about/statute.

board is then to "call upon the recipient State or States to remedy forthwith any non-compliance which it finds to have occurred," as well as "report the non-compliance to all members and to the Security Council and General Assembly of the United Nations."

In the case of Iran, the September 24, 2005, IAEA board resolution (GOV/2005/77) stated that the board

> found that Iran's many failures and breaches of its obligations to comply with its NPT Safeguards Agreement, as detailed in GOV/2003/75 [a November 2003 report from then-Director General ElBaradei], constitute non compliance in the context of Article XII.C of the Agency's Statute;

According to the resolution, the board also found

> that the history of concealment of Iran's nuclear activities referred to in the Director General's report [GOV/2003/75], the nature of these activities, issues brought to light in the course of the Agency's verification of declarations made by Iran since September 2002 and the resulting absence of confidence that Iran's nuclear programme is exclusively for peaceful purposes have given rise to questions that are within the competence of the Security Council, as the organ bearing the main responsibility for the maintenance of international peace and security.

ElBaradei issued the report cited by the resolution, GOV/2003/75, in November 2003.[54] It described a variety of Iranian nuclear activities, which are detailed in **Appendix A**, that violated Tehran's safeguards agreement. ElBaradei subsequently reported that Iran has taken corrective measures to address these safeguards breaches. As noted above, the 2005 resolution called on Iran to take a variety of actions that Tehran was not legally required to implement.

U.N. Charter and the Security Council

Several articles of the U.N. Charter, which is a treaty, describe the Security Council's authority to impose requirements and sanctions on Iran.[55] Article 24 confers on the council "primary responsibility for the maintenance of international peace and security." The article also states that the "specific powers granted to the Security Council for the discharge of these duties are laid down" in several chapters of the charter, including Chapter VII, which describes the actions that the council may take in response to "threats to the peace, breaches of the peace, and acts of aggression."

Chapter VII of the charter contains three articles relevant to the Iran case. Security Council resolutions that made mandatory the IAEA's demands concerning Iran's nuclear program invoked Chapter VII. Article 39 of that chapter states that the council

> shall determine the existence of any threat to the peace, breach of the peace, or act of aggression and shall make recommendations, or decide what measures shall be taken in accordance with Articles 41 and 42, to maintain or restore international peace and security.

Resolution 1696 invoked Article 40 of Chapter VII "in order to make mandatory the suspension required by the IAEA." As noted, that resolution did not impose any sanctions on Iran. Article 40 states that

[54] *Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran*, Report by the Director General, GOV/2003/75, November 10, 2003.

[55] The text of the charter is available at http://www.un.org/en/sections/un-charter/un-charter-full-text/.

> the Security Council may, before making the recommendations or deciding upon the measures provided for in Article 39 [of Chapter VII], call upon the parties concerned to comply with such provisional measures as it deems necessary or desirable.

Resolutions 1737, 1747, 1803, and 1929, which did impose sanctions, invoked Article 41 of Chapter VII. According to Article 41, the Security Council

> may decide what measures not involving the use of armed force are to be employed to give effect to its decisions, and it may call upon the Members of the United Nations to apply such measures. These may include complete or partial interruption of economic relations and of rail, sea, air, postal, telegraphic, radio, and other means of communication, and the severance of diplomatic relations.

As noted, Security Council resolution 1835 did not impose new sanctions, but reaffirmed the previous resolutions and called on Iran to comply with them.

It is worth noting that Article 25 of the U.N. Charter obligates U.N. members "to accept and carry out the decisions of the Security Council." Moreover, Article 103 of the Charter states that

> [i]n the event of a conflict between the obligations of the Members of the United Nations under the present Charter and their obligations under any other international agreement, their obligations under the present Charter shall prevail.

The IAEA also has an obligation to cooperate with the Security Council, "[b]y virtue of its Relationship Agreement with the United Nations."[56] As noted, Security Council Resolution 2231 requests the IAEA Director General "to undertake the necessary verification and monitoring of Iran's nuclear-related commitments for the full duration of those commitments under the JCPOA."

Has Iran Violated the NPT?[57]

Whether Iran has violated the NPT is unclear. The treaty does not contain a mechanism for determining that a state-party has violated its obligations. Moreover, there does not appear to be a formal procedure for determining such violations. An NPT Review Conference would, however, be one venue for NPT states-parties to make such a determination.

The U.N. Security Council has never declared Iran to be in violation of the NPT; neither the council nor the U.N. General Assembly has a responsibility to adjudicate treaty violations. However, the lack of a ruling by the council on Iran's compliance with the NPT has apparently had little practical effect because, as noted, the council has taken action in response to the IAEA Board of Governors' determination that Iran has violated its safeguards agreement.

Iran's violations of its safeguards agreement appear to constitute violations of Article III, which requires NPT nonnuclear-weapon states-parties to accept IAEA safeguards, in accordance with the agency's statue, "for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices."

Tehran may also have violated provisions of Article II which state that nonnuclear-weapon states-parties shall not "manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices" or "seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices."

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[56] GOV/2013/27. The agreement is contained in INFCIRC/11.

[57] Portions of this section are based on interviews with U.N. and State Department officials.

As noted, the IAEA investigated evidence of what then-IAEA Director General Mohamed ElBaradei described in June 2008 as "possible military dimensions to Iran's nuclear programme." Such activities may indicate that Tehran has violated both Article II provisions described above. Moreover, a November 2007 National Intelligence Estimate (NIE) stated that "until fall 2003, Iranian military entities were working under government direction to develop nuclear weapons."[58] This past program could be a violation of Article II, although the estimate does not provide any detail about the program. Nevertheless, the IAEA has never reported that Iran has attempted to develop nuclear weapons.

Despite the lack of such an IAEA conclusion, a 2005 State Department report regarding states' compliance with nonproliferation agreements argued that the country had violated Article II of the NPT:

> The breadth of Iran's nuclear development efforts, the secrecy and deceptions with which they have been conducted for nearly 20 years, its redundant and surreptitious procurement channels, Iran's persistent failure to comply with its obligations to report to the IAEA and to apply safeguards to such activities, and the lack of a reasonable economic justification for this program leads us to conclude that Iran is pursuing an effort to manufacture nuclear weapons, and has sought and received assistance in this effort in violation of Article II of the NPT.[59]

The report also stated that Iran's "weapons program combines elements" of Tehran's declared nuclear activities, as well as suspected "undeclared fuel cycle and other activities that may exist, including those that may be run solely by the military."

The State Department's 2005 reasoning appears to be based on an interpretation of the NPT which holds that a wide scope of nuclear activities could constitute violations of Article II. The 2005 report states that assessments regarding Article II compliance "must look at the totality of the facts, including judgments as to" a state-party's "purpose in undertaking the nuclear activities in question." The report also includes a list of activities which could constitute such noncompliance.[60]

The 2005 State Department report cites testimony from then-Arms Control and Disarmament Agency Director William Foster during a 1968 Senate Foreign Relations Committee hearing.[61] Foster stated that "facts indicating that the purpose of a particular activity was the acquisition of a nuclear explosive device would tend to show non-compliance" with Article II. He gave two examples: "the construction of an experimental or prototype nuclear explosive device" and "the production of components which could only have relevance" to such a device. However, Foster

[58] *Iran: Nuclear Intentions and Capabilities*, National Intelligence Estimate, November 2007. Subsequent U.S. official statements have been consistent with the NIE.

[59] *Adherence to and Compliance with Arms Control, Nonproliferation and Disarmament Agreements and Commitments*, Department of State, August 2005.

[60] According to the report, such activities can include (1) the presence of undeclared nuclear facilities; (2) procurement patterns inconsistent with a civil nuclear program (e.g., clandestine procurement networks, possibly including the use of front companies, false end-use information, and fraudulent documentation); (3) security measures beyond what would be appropriate for peaceful, civil nuclear installations; (4) a pattern of Article III safeguards violations suggestive not of mere mistake or incompetence, but of willful violation and/or systematic deception and denial efforts aimed at concealing nuclear activities from the IAEA; and (5) a nuclear program with little (or no) coherence for peaceful purposes, but great coherence for weapons purposes.

[61] *Nonproliferation Treaty*, Senate Committee on Foreign Relations, Joint Committee on Atomic Energy [Part 1] July 10-12, 17, 1968; Session 90-2 (1968). The complete statement regarding Article II violations is in **Appendix C**.

also noted that a variety of other activities could also violate Article II, adding that the United States believed it impossible "to formulate a comprehensive definition or interpretation."

It is worth noting that the 2005 State Department report's arguments appear to rely heavily on the notion that a state's apparent intentions underlying certain nuclear-related activities can be used to determine violations of Article II. This interpretation is not shared by all experts.[62] The 2005 report "primarily reflected activities from January 2002 through December 2003." Whether the State Department assesses that Iran has violated Article II since then is unclear. A version of the report released in 2010, which primarily reflected activities from January 1, 2004, through December 31, 2008, states that "the issues underlying" the 2005 report's conclusion regarding Iran's Article II compliance "remain unresolved."[63] Subsequent versions of the report reiterated the 2010 report's assessment until 2016, when the State Department assessed that "previous issues leading to NPT noncompliance findings [regarding Iran] had been resolved."[64] As noted, the 2007 NIE assessed that Iran halted its nuclear weapons program in 2003; subsequent U.S. official statements have consistently reiterated that Tehran has not yet decided to build nuclear weapons.[65] The United Kingdom's then-Foreign Secretary William Hague would not say whether Iran had violated Article II when asked by a Member of Parliament in March 2012.[66]

[62] Personal communication with Andreas Persbo, Senior Researcher, the Verification Research, Training and Information Centre.

[63] Quotations are from *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, Department of State, July 2010.

[64] *Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments*, Department of State, April 2016.

[65] See, for example, Director of National Intelligence James R. Clapper, *Statement for the Record, U.S. Intelligence Community Worldwide Threat Assessment*, February 26, 2015.

[66] *Developments in UK Foreign Policy*, House of Commons: Oral Evidence Taken Before the Foreign Affairs Committee, March 8, 2012.

Appendix A. Iranian Noncompliance with Its IAEA Safeguards Agreement

The November 2003 report (GOV/2003/75) from IAEA Director General ElBaradei to the agency's Board of Governors details what the September 2005 board resolution described as "Iran's many failures and breaches of its obligations to comply with its safeguards agreement."

The report stated that

> Iran has failed in a number of instances over an extended period of time to meet its obligations under its Safeguards Agreement with respect to the reporting of nuclear material and its processing and use, as well as the declaration of facilities where such material has been processed and stored.

The report detailed some of these failures and referenced other failures described in two earlier reports (GOV/2003/40 and GOV/2003/63) from ElBaradei to the IAEA board.[67]

According to GOV/2003/40, Iran failed to declare the following activities to the agency:

- The importation of natural uranium, and its subsequent transfer for further processing.
- The processing and use of the imported natural uranium, including the production and loss of nuclear material, and the production and transfer of resulting waste.

Additionally, Iran failed to

- declare the facilities where nuclear material (including the waste) was received, stored, and processed;
- provide in a timely manner updated design information for a research reactor located in Tehran; as well as
- provide in a timely manner information on two waste storage sites.

GOV/2003/63 stated that Iran failed to report uranium conversion experiments to the IAEA. According to GOV/2003/75, Iran failed to report the following activities to the IAEA:

- The use of imported natural uranium hexafluoride for the testing of centrifuges, as well as the subsequent production of enriched and depleted uranium.
- The importation of natural uranium metal and its subsequent transfer for use in laser enrichment experiments, including the production of enriched uranium, the loss of nuclear material during these operations, and the production and transfer of resulting waste.
- The production of a variety of nuclear compounds from several different imported nuclear materials, and the production and transfer of resulting wastes.
- The production of uranium targets and their irradiation in the Tehran Research Reactor, the subsequent processing of those targets (including the separation of plutonium), the production and transfer of resulting waste, and the storage of unprocessed irradiated targets.

[67] Those reports are available at http://www.iaea.org/Publications/Documents/Board/2003/gov2003-40.pdf and http://www.iaea.org/Publications/Documents/Board/2003/gov2003-63.pdf.

Iran also failed to provide the agency with design information for a variety of nuclear-related facilities, according to the report. These included the following:

- A centrifuge testing facility.
- Two laser laboratories and locations where resulting wastes were processed.
- Facilities involved in the production of a variety of nuclear compounds.
- The Tehran Research Reactor (with respect to the irradiation of uranium targets), the hot cell facility where the plutonium separation took place, as well as the relevant waste handling facility.

Additionally, the report cited Iran's "failure on many occasions to co-operate to facilitate the implementation of safeguards, through concealment" of its nuclear activities.

Appendix B. IAEA Special Inspections

As noted, Iran's obligations under its Additional Protocol to provide access to certain locations are unclear; Tehran may refuse to grant the IAEA access to certain facilities. In such a case, the IAEA Director General could call for a special inspection; the inspection could require approval from the IAEA Board of Governors. According to the IAEA, an inspection is deemed to be special when it is in addition to IAEA routine inspections or "involves access to information or locations" that have not been identified to the IAEA as part of the agency's implementation of safeguards in that country.[68] Such inspections "are foreseen in all Agency safeguards agreements, principally as a means for the Agency to resolve unforeseen verification problems," according to a 1991 IAEA document.[69] Paragraph 73 of the model safeguards agreement, INFCIRC 153, states that comprehensive safeguards agreements should provide for the IAEA's ability to "make special inspections," subject to certain procedures, if the agency

> considers that information made available by the State, including explanations from the State and information obtained from routine inspections, is not adequate for the Agency to fulfill its responsibilities under the Agreement.

According to the 1991 document, a special inspection could be triggered by the IAEA's receipt of "plausible information, which is not adequately explained by the State or otherwise resolved" by other IAEA inspections that the country has "nuclear material in a nuclear activity" outside of IAEA safeguards, or that the state has an undeclared nuclear facility that it had been required to report to the agency.

The IAEA Director General "has the authority ... to determine the need for, and to direct the carrying out of, special inspections," according to another 1991 IAEA paper.[70] In the event that the IAEA argues for a special inspection in a country, the agency and the government "must hold immediate consultations," according to the 1991 paper. Any dispute regarding the inspection request must be resolved according to dispute settlement provisions described in INFCIRC 153. However, paragraph 18 of INFCIRC 153 states that

> if the Board, upon report of the Director General, decides that an action by the State is essential and urgent in order to ensure verification that nuclear material subject to safeguards under the Agreement is not diverted to nuclear weapons or other nuclear explosive devices the Board shall be able to call upon the State to take the required action without delay, irrespective of whether procedures for the settlement of a dispute have been invoked.

If the state refuses the inspection, the IAEA Board of Governors can take action according to paragraph 19 of INFCIRC 153, including reporting the matter to the U.N. Security Council.[71]

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[68] *2001 IAEA Safeguards Glossary*. According to that Glossary, special inspections can also be used "to verify the information contained in special reports." States with comprehensive safeguards agreements are required to submit a special report to the IAEA if there is a "loss of nuclear material exceeding specified limits" or if "containment and surveillance measures have been unexpectedly changed from those specified in the Subsidiary Arrangements." Subsidiary arrangements describe the "technical and administrative procedures for specifying how the provisions laid down in a safeguards agreement are to be applied." The IAEA negotiates changes to such arrangements with the state if alterations to the country's nuclear facilities necessitate such changes.

[69] GOV/INF/613, May 29, 1991.

[70] GOV/2554, November 12, 1991.

[71] Ibid.

Appendix C. Extended Remarks by William Foster Regarding Possible NPT Article II Violations

On July 10, 1968, then-Arms Control and Disarmament Agency Director William Foster testified before the Senate Foreign Relations Committee about the NPT. In response to a question regarding the type of nuclear activities prohibited by Article II of the treaty, Foster supplied the following statement:

> Extension of Remarks by Mr. Foster in Response to Question Regarding Nuclear Explosive Devices
>
> The treaty articles in question are Article II, in which non-nuclear-weapon parties undertake "not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices," and Article IV, which provides that nothing in the Treaty is to be interpreted as affecting the right of all Parties to the Treaty "to develop research, production and use of nuclear energy for peaceful purposes…in conformity with Articles I and II of this Treaty." In the course of the negotiation of the Treaty, United States representatives were asked their views on what would constitute the "manufacture" of a nuclear weapon or other nuclear explosive device under Article II of the draft treaty. Our reply was as follows:
>
> "While the general intent of this provision seems clear, and its application to cases such as those discussed below should present little difficulty, the United States believe [sic] it is not possible at this time to formulate a comprehensive definition or interpretation. There are many hypothetical situations which might be imagined and it is doubtful that any general definition or interpretation, unrelated to specific fact situations could satisfactorily deal with all such situations.
>
> "Some general observations can be made with respect to the question of whether or not a specific activity constitutes prohibited manufacture under the proposed treaty. For example, facts indicating that the purpose of a particular activity was the acquisition of a nuclear explosive device would tend to show non-compliance. (Thus, the construction of an experimental or prototype nuclear explosive device would be covered by the term 'manufacture' as would be the production of components which could only have relevance to a nuclear explosive device.) Again, while the placing of a particular activity under safeguards would not, in and of itself, settle the question of whether that activity was in compliance with the treaty, it would of course be helpful in allaying any suspicion of non-compliance.
>
> "It may be useful to point out, for illustrative purposes, several activities which the United States would not consider per se to be violations of the prohibitions in Article II. Neither uranium enrichment nor the stockpiling of fissionable material in connection with a peaceful program would violate Article II so long as these activities were safeguarded under Article III. Also clearly permitted would be the development, under safeguards, of plutonium fueled power reactors, including research on the properties of metallic plutonium, nor would Article II interfere with the development or use of fast breeder reactors under safeguards."

Author Information

Paul K. Kerr
Specialist in Nonproliferation

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