



Known or Possible Iranian Violations of the JCPOA

- Prior to the deal, Iran [refused](#) to cooperate with the International Atomic Energy Agency (IAEA) investigating its Possible Military Dimensions (PMD). Iran enabled the IAEA to draw partial conclusions on 2 of the 12 elements. In 5 cases, the IAEA noted that PMD occurred despite Iran's claims.
 - "Iran has [demanded](#) that the international community "close the file" on PMDs. Iran also has prevented the IAEA from interviewing key personnel in charge of PMD activities."
 - The disclosure of Project Amad [showed](#) that Iran [held back](#) information. The files, [confirmed](#) by the U.S., included diagrams of nuclear detonation devices, nuclear warhead designs, and plans for nuclear testing sites, among other incriminating information. Some of these items [must have been produced](#) and must be somewhere. The files show that Iran lied when its leaders, including Iranian President Hassan Rouhani [said](#): "Iran has never sought to build nuclear weapons." [It shows](#) that the Iranians continue to want to build such weapons. They [show](#) that Iran violated the NNPT and failed to come clean to the IAEA about its past nuclear research.
 - ISIS [has reported](#) that "the new information from the Iranian nuclear archive conclusively shows that the Parchin site did house high explosive chambers capable for use in nuclear weapons research and development... that Iran conducted at Parchin more high explosive tests related to nuclear weapons development than previously thought...(and Iran's) failure to destroy all these documents, and purportedly, the equipment used in these activities, does not align with its commitment under the JCPOA "that under no circumstances will Iran ever seek, develop or acquire nuclear weapons."" ISIS has called for the Joint Commission and the IAEA to investigate.
 - The Obama administration [concluded](#) that uranium particles discovered at Parchin likely were tied to the country's covert nuclear weapons program. This [contradicts](#) Iran's claims.
- Post-deal, Iran refused to cooperate with the IAEA. Each of the 8 quarterly IAEA reports [issued](#) since the JCPOA's implementation [has lacked information](#) that would enable independent assessments of Iranian compliance, raising concern that the agency seeks to conceal. None of the reports states that Iran [has complied](#) with the JCPOA. Rather, as the JCPOA notes, the IAEA's mandate primarily entails monitoring and reporting on Tehran's nuclear-related actions (or lack thereof) pursuant to the JCPOA's provisions.
 - The Aug. 31 IAEA [report](#) omitted – among other data – information on centrifuge production, centrifuge R&D activities, the quantity of heavy water stored in Oman, & nuclear weaponization issues.
 - The Institute for Science and International Security (ISIS) [reported](#) there are at least eight key pieces of information missing from the IAEA report, and ["\(w\)ithout this information, an independent determination of whether Iran is complying with the JCPOA is not possible."](#)
 - The missing information detailed in the ISIS [report](#):
 - The amount of Low Enriched Uranium (LEU) in Iran, as well as how much has been sent out, diluted and produced. LEU can be enriched to make weapons-grade uranium or enriched to 3% and used as fuel for certain nuclear reactors.
 - An alleged "secret agreement" that requires Iran to irradiate its 20% LEU. The JCPOA requires Iran's 20% LEU to be placed in a reactor in Tehran.
 - How many centrifuges are operating in Iran's Natanz nuclear facility.

- Certain information on Iran's Fordow facility. Per JCPOA provisions, all centrifuges at Fordow are supposed to be removed, while the facility is to be converted into a "research center."
- A shipment of Iranian heavy water went to Oman. Heavy water is a key [component](#) in the production of plutonium; plutonium can in turn be utilized in nuclear weapons. Under the JCPOA, Iran is permitted to have no more than 130 metric tons. The state of ownership of the heavy water in Oman was crucial to ensuring Iran's JCPOA compliance.
- Iran's research into advanced centrifuges has been within compliance, but little information is provided as to which models, or how many, are in production. This information is crucial due to the fact that certain [models](#) of Iranian centrifuges are more powerful than older models, meaning Iran could make a significant leap forward in its nuclear development should the country cheat.
- There is a lack of clarity in the IAEA report regarding Iran's nuclear weaponization research, particularly at Parchin, which was believed to have been involved in explosive tests.
- The IAEA is not involved in the Procurement Working Group, which is responsible for any nuclear related transfers of technology and resources that could be used for nuclear weapons.
- **Iran [continues to produce excess heavy water at Arak in violation of the JCPOA.](#)**
 - The [U.S.](#) & Russia bought or traded for the excess heavy water, which subsidizes the Iranian nuclear program, and will indirectly support terrorism. The U.S. [wired](#) \$8.6 million for 32 metric tons.
 - Iran [is storing](#) the excess heavy water in Oman, which is not being sold.
 - Mark Dubowitz, of the Foundation for Defense of Democracies, has explained: "These U.S. subsidies will help Tehran perfect its heavy water production skills so it will be fully prepared to develop its plutonium bomb-making capabilities when restrictions on the program sunset ..."
 - ISIS has written: "The Department of Energy [did not](#) need to purchase the heavy water from Iran and could have bought it from India, Argentina, or Canada. Because DOE's current needs for the heavy water are relatively modest, most of the recent purchase is being considered for sale to private industry. However, in addition to the negative security implications, the US purchase of the heavy water from Iran threatens the development of a reliable North American supply chain of heavy water."
- **Iran is not allowing for international inspections of military sites.** Iranian [officials had said](#) Tehran would [not allow](#) international inspectors to enter military sites, in comments that contradicted JCPOA language. Parchin is one such site, which was [inspected](#) once under only special, restricted, circumstances. In 2017, Velayati, a senior adviser to Leader Khamenei, [reiterated](#), "Under no circumstances are the Americans allowed to inspect Iran's military sites." He has [repeated](#) this. Salehi, the head of the Atomic Energy Organization of Iran, [has claimed](#) that there are no provisions within the JCPOA or in the Additional Protocol to obligate Iran to permit inspection of its military sites. Both [the IAEA](#) and [Olli Heinonen acknowledge](#) that there have been no inspections. The Russians [are helping](#) to block inspections.
- **Iran [exceeded](#) the limits on advanced centrifuge research and development by building (IR-8) and operating (IR-6) larger numbers of advanced centrifuges than is allowed.** It [assembled](#) more than a half dozen IR-8 rotor assemblies in Tehran. It [operated](#) 13-15 IR-6 centrifuges in a single cascade. Luckily, their efforts [have largely](#) been a failure, although this does demonstrate the Iranian desire to produce nuclear weapons.
- **Iran is [continuing to produce](#) uranium enriched to 5% beyond the quantity permitted it.** Two such violations have been recorded by the IAEA. Iran has exported the surplus for storage in Oman, in a procedure that does not exist in the agreement and is not allowed.
- German intelligence [has reported](#) that Iran, in 2015 and 2016, attempted more than one hundred times to obtain illicit technology that could be used for military nuclear and ballistic missile programs. More information is [here](#) and [here](#) and [here](#) and [here](#) and [here](#) and [here](#) as well.
- The ISIS [has learned](#) that Iran made an attempt to purchase tons of controlled carbon fiber. This attempt occurred after Implementation Day. This attempt raises concerns over whether Iran intends to abide by its commitments, as it allows Iran to quickly build an advanced centrifuge enrichment plant if it chooses to leave or disregard the JCPOA during the next few years.

- Iran [has announced](#) its decision “To Construct Naval Nuclear Propulsion” which requires Uranium Enriched To 60%-90%. With this announcement, Iran is taking the first practical step to eliminating its fundamental obligation in the JCPOA not to enrich uranium above 3.67%.
- “The JCPOA’s limit of 300 kilograms of low-enriched uranium (LEU) [was calculated](#) to put Iran’s breakout time at one year. However, as Russia has acknowledged, there is excess LEU in Iran above the 300 kilograms allowed by the nuclear deal. Breakout time diminishes if Tehran is allowed to continue to grow its LEU stock further, such as by keeping part of its stockpile overseas (as it did recently with heavy water in Oman). Unless sold or transferred in ownership, the LEU remains part of Iran’s nuclear material inventory. At current production rates of around 100 kilograms of additional LEU per month, even without installing any additional centrifuges, Tehran’s breakout time will be reduced to half a year within just a few months – far below the U.S. administration’s promised one-year breakout time.”
- The Exemptions & Loopholes: The ISIS has reported that the West [agreed](#) “in secret” to allow Iran to evade some restrictions on low-enriched uranium (LEU) in the nuclear deal to meet the nuclear deadline. If these exemptions were not allowed, Iran would not have been in compliance by the Jan. 16 deadline.
 - ISIS noted that the LEU could be processed into weapons-grade material, so the secret side deal makes it effectively impossible to know how much bomb material Iran could produce, on fairly short notice.
 - The exemptions & loopholes:
 - Iran has an exemption for reactor-grade enriched UF6 (uranium hexafluoride, the feed material for enrichment centrifuges) in the form of low-level and sludge waste. This may have been a minor violation although the report said the amount of this material is unknown.
 - Ignoring “lab contaminant” UF6 enriched to 20% uranium-235 judged as “unrecoverable.” Although this may also be a minor violation, the report says the amount of this material and how it was judged unrecoverable is not known.
 - Iran was allowed to maintain 22 large - more than six cubic meters - radiation containment chambers, or hot cells. They were not supposed to go above six cubic meters. These hot cells are supposed to be used for producing medical isotopes but can be “misused for secret, mostly small-scale plutonium separation efforts.” Plutonium-separation experiments have only one purpose: developing the capability to produce plutonium nuclear-weapons fuel.
 - There is a loophole on a 130-ton cap for Iran’s heavy-water stockpile by allowing Tehran to store large amounts of heavy water in Oman that remain under Iran’s control.
 - The Commission established a technical working group to evaluate a small amount of enriched uranium remaining in the equipment of a nuclear plant. The ISIS said it is unknown whether the working group will give Iran an exemption for this enriched uranium.
 - Albright, who was a co-author on the report, [said](#) the exemptions have been kept secret from the public, and were not disclosed to Congress until after they were granted to Iran.
 - These exemptions are not temporary. Instead the ISIS confirmed [the U.S. and its partners are right now considering whether to lock in the past exemptions and create new ones.](#)
- Iran [is violating the 5 year arms embargo \(UNSCR 2231\)](#). 2231 requires prior approval by the Security Council for any arms transfer to or from Iran, and thus, [allows](#) the U.S. to block sales.¹
 - Iran [has bought](#) \$8 billion in weapons from Russia, including the [S-300 missile defense system](#), [fighter jets](#) and [military helicopters](#). They [may buy](#) \$10 billion more.
 - Iran has [exported weapons and aid to Syria, to Yemen \(including missiles\)](#), to [Kuwait](#), and to [Bahrain](#). Iran [has transferred](#) short-range ballistic missiles to the PMF, and it is helping those groups to start making their own.
 - A July 2016 report by the UN [says](#) that Iranian firms participated in a defense trade show in Iraq in 2015, in potential violation of UNSC 2231. No prior approval from the Security Council was sought. One of the firms, the [Defense Industries Organization \(DIO\)](#), is on the UN’s blacklist.

¹ In addition to there being no real deal, Iran has [announced](#) that it considers the UNSCR 2231 as separate from the JCPOA, and that it has “no intention” of abiding by the UN prohibitions on developing ballistic missiles or purchasing arms.

- The UN has “expressed concern” that Iran may have violated an arms embargo by supplying weapons and missiles to Hezbollah. A German report [has criticized](#) them and Russia.
- Iran [ordered](#) its scientists to start developing systems for nuclear-powered vessels in response to what it calls a U.S. violation of the JCPOA (the reauthorization of the Iran Sanctions Act). Iran’s move, if carried out, would probably require Iran to enrich uranium to a fissile purity above the level set in the nuclear deal.
- It is alleged that Iran is [doing](#) engineering and weaponization testing at a military complex near Parchin.
- **Iran is [most likely violating](#) Section T of the deal, which explicitly bans Iran from “activities which could contribute to the development of a nuclear explosive device”.** It lists examples such as using computer models that simulate a nuclear bomb, or designing multi-point, explosive detonation systems. The IAEA has admitted that it has not been able to verify Iran is implementing Section T because the relevant activities would be occurring on military sites. Project Amad [included](#) designs that violated this section.
- Peter Vincent Pry, executive director for a Congressional Advisory Board, [has pointed](#) to unclassified satellite imagery showing an Iranian military base with four high-energy power lines carrying about 750,000 volts each, running underground into a facility to which the IAEA has no access. Pry suggested that Iran is using those lines to power uranium centrifuges that have not been declared to the international community.
- According to Ali Akbar Salehi, head of the Atomic Energy Organization Of Iran, **Iran [never dismantled the core](#) of the plutonium reactor at Arak, saying that Iran needed it for research.** He also said that only the external pipelines of the reactor had been filled with cement, and it could be easily reactivated. This means that the January 16, 2016 IAEA report by the Director General, which confirmed that Iran had removed and “rendered inoperable” the Arak facility’s calandria, was incorrect. According to the ISIS, Iran has also tried to make changes to the fuel design for the modified Arak reactor, that differ from what the JCPOA requires. Iran also [admitted](#) it bought replacement parts for its Arak nuclear reactor even though the JCPOA required the destruction of the original components.
- In 2019, the head of Iran’s nuclear program said that Iran [has begun](#) “preliminary activities for designing” a modern process for 20-percent uranium enrichment for its 50-year-old research reactor in Tehran, signaling new danger for the nuclear deal. Restarting enrichment at that level would mean Iran had withdrawn the 2015 nuclear deal.

For more information please contact: EMET/ 202.601.7422/ Info@emetonline.org/ www.emetonline.org