

**Testimony of David Albright,
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Institute for Science and International Security,
before the House Subcommittee on National Security,
Committee of Oversight and Government Reform**

**Assessing the Iran Deal: Examining Iranian Non-Compliance with the Joint
Comprehensive Plan of Action and United Nations Security Council
Resolution 2231**

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The Joint Comprehensive Plan of Action (JCPOA) needs to be implemented more effectively and its nuclear conditions strengthened and better verified. A critical part of that effort is to determine the type and extent of Iranian non-compliance with provisions in the JCPOA and associated United Nations Security Council (UNSC) resolution 2231.

The deal's implementation under the Obama administration was too permissive and tolerant of Iran's violations of the deal, its exploitation of loopholes, and its avoidance of critical verification requirements. The result was that Iran was able to push the envelope of allowed behavior in directions harmful to U.S. national security. Too often, the Obama administration made concessions, tolerated cheating, or avoided strengthening steps out of a misplaced fear that Iran would walk away from the deal or that somehow President Rouhani's presidency needed protecting. This led to absurd situations where U.S. officials badgered European JCPOA country officials to support initiatives clearly favoring Iran that were contrary to their own views and interests. One must ask based on the JCPOA's implementation so far, why have the deal in the first place if verification steps or strengthening measures have been avoided for fear of the JCPOA failing?

Until today, the Trump administration has continued to implement the deal. I hope that policy continues. However, that does not mean that the Trump administration should continue the Obama administration's overly permissive way of implementing the deal and its avoidance of dealing with the JCPOA's shortcomings. I certainly expect the Trump administration to chart a new path forward that better protects U.S. interests and national and Middle East regional security.

There is an urgency to focus on fixing deficiencies in the Iran deal. At its core, the Iran deal is a bet that by the time the nuclear limitations end, Iran, the region, or both will have changed so much that Iran will no longer seek nuclear weapons. But despite immense sanctions relief, Iran has been increasing its conventional military power and efforts at establishing regional hegemony, including interfering in the affairs of and threatening its neighbors. The bet does not appear to be winnable under the current circumstances, and Iran's current trajectory is a threat to the United States and its allies in the region.

Those who argued that a key benefit of the nuclear deal would be a moderation of Iran's behavior in the region have been sadly disappointed. Armed with substantial funds and a growing economy, Iran is challenging the United States in the region and appears as committed to maintaining the capability to pursue a nuclear weapons path as before, just a longer path.

When the major nuclear limitations end at the end of year 15 of the deal, Iran has stated it will have industrial-size enrichment facilities. With this capability, it will be poised to rapidly break out to make weapon-grade uranium, first within a few months and in successive years, breakout times will decrease toward a few days. Iran will have developed advanced centrifuges that would enable a quick sneak out to nuclear weapons. It is seeking to master long-range, nuclear-capable ballistic missiles including possibly intercontinental nuclear-tipped ballistic missiles. So, in a sense, the JCPOA potentially delays and creates an even worse reckoning. This Iranian nuclear future is unacceptable. A solution needs to be thought through, and a remediation path developed that will strengthen and fix the deal.

But as this longer-term process develops, the deal needs to be better enforced and verified. A priority is knowing how Iran has been violating the deal and associated United Nations Security Council resolution 2231. Also important is understanding how Iran exploits loopholes in the deal and pushes the envelope of tolerated behavior.

Identifying Violations

At my Institute, we devote resources to assessing Iran's compliance with the JCPOA. However, determining Iranian violations and loopholes has been complicated by the excessive secrecy surrounding the implementation of the deal and its associated parallel arrangements. In addition, International Atomic Energy Agency (IAEA) reporting on the situation in Iran has dramatically decreased in quantity and quality. Much of this secrecy is unnecessary and counterproductive, and some of the secrecy of the Obama administration appeared more aimed at hiding potentially problematic implementation issues as part of a plan to fend off critics of the deal. Despite the roadblocks, a great amount of information has been learned, as would be expected with an international deal involving so many countries and individuals.

I should also note and commend the Joint Commission's move last December to release publicly its major decisions.¹ It undoubtedly felt increasing pressure to do so as a result of the election of Donald Trump who has supported more openness, pressure from groups like mine, and finally the important role played by Congress in demanding more transparency. However, much of the key information remains secret. Moreover, the IAEA continues to underreport the actual situation on the ground, which makes it harder for governments and publics to evaluate the true situation with respect to Iran's compliance with the JCPOA.

¹ *Communication Dated 21 December 2016 to the Agency Sent on Behalf of High Representative Mogherini in Her Capacity as Coordinator of the Joint Commission Established Under the Joint Comprehensive Plan of Action, INFCIRC/907 and Revisions and Addendums*, December 21, 2016 and January 12, 2017, <https://www.iaea.org/publications/documents/infcircs/communication-dated-21-december-2016-to-the-agency-sent-on-behalf-of-high-representative-mogherini-in-her-capacity-as-coordinator-of-the-joint-commission-established-under-the-joint-comprehensive-plan-of-action>

Based on available information, certain patterns of Iranian non-compliance are clear. Iran often conducts small-scale cheating on the JCPOA's nuclear limitations. It misinterprets clauses to justify actions that should more properly be viewed as violations. A damaging pattern that developed during the Obama administration is that Iran would create a crisis over a potential violation, the United States and allies would have to find a "solution," and Iran would cynically demand compensation as part of that solution. Throughout this process, Iran has demanded an unjustified amount of secrecy from the P5+1 and the IAEA, hiding many of its activities from governments and the public and thereby more easily accomplishing its deceptive and brazen goals.

Violations of UN Security Council Resolution Involving Ballistic Missiles and Conventional Arms

Iran continues to test ballistic missiles that are inconsistent with or in violation of UN Security Council resolution 2231. Iran's ongoing development of missiles capable of carrying nuclear weapons is a direct threat to the nuclear deal and cannot be treated as somehow unrelated to the JCPOA. A nuclear weapon is properly defined as a nuclear warhead and a delivery system. This definition was used by South Africa for its nuclear weapons program back in the 1980s, when that program was active and engaged in intense secrecy and obfuscation to deceive the world.² When the program became more overt with the onset of missile flight testing, it too denied that its missiles would ever carry nuclear weapons. But it admitted the interconnectivity of the two programs only after it verifiably abandoned its nuclear weapons program in the early 1990s. Iran's ballistic missile program should be viewed as the other half of a nuclear weapon whose development continues unabated today, and it should be treated accordingly. At the least, Iran's continued testing of ballistic missiles should be viewed as a violation of UNSC 2231 and inconsistent with the fundamental purpose of the JCPOA.

In addition, Iran is not in compliance with UNSC resolution 2231's prohibition on conventional weapons sales and transfers and against making procurements for its military and missile programs without UN Security Council authorization (see references in footnote).³

Iran/North Korean Cooperation

The United States has also sanctioned Iranian and North Korean entities for cooperating on ballistic missiles and conventional weapons, including coordinating shipments of commodities

² David Albright with Andrea Stricker, *Revisiting South Africa's Nuclear Weapons Program* (Washington, DC: Institute for Science and International Security, 2016). <http://isis-online.org/uploads/isis-reports/documents/RevisitingSouthAfricasNuclearWeaponsProgram.pdf>

³ "Iran Tests Ballistic Missile in Defiance of UN Resolution, U.S. Officials Say," FoxNews.com, January 30, 2017, <http://www.foxnews.com/world/2017/01/30/iran-conducts-ballistic-missile-test-us-officials-say.html> ; U.S. Department of Treasury, "Treasury Sanctions Supporters of Iran's Ballistic Missile Program and Iran's Islamic Revolutionary Guards Corps – Qods Force," February 3, 2017, <https://www.treasury.gov/press-center/press-releases/Pages/as0004.aspx> ; *Second six-month report of the Facilitator on the implementation of Security Council Resolution 2231 (2015)*, S/2017/49, January 18, 2017.

and traveling to share technology and development efforts.⁴ There are also unverified concerns that they may be undertaking nuclear cooperation or transferring nuclear technology, equipment, or materials to each other. It goes without saying that Iran's missile and conventional military cooperation with North Korea also violates UNSC resolutions on North Korea.⁵ Any nuclear cooperation that is uncovered would be a breach of the JCPOA.

Heavy Water

Iran has twice had more than its heavy water limit of 130 metric tonnes inside Iran, as has been noted by the IAEA in its quarterly reports. As it was approaching its second violation, the IAEA warned Iran that it would soon reach the cap. Instead of stopping heavy water production or blending down some heavy water into normal water, Iran knowingly violated the 130 metric tonnes cap. More recently, it has argued that the cap is not really binding. In early March 2017, Iran stated: "Nothing in the JCPOA requires Iran to **ship out the excess Heavy Water** which is made available to the international market but has not yet found an actual buyer to which the heavy water needs to be delivered (bolding in original)."⁶ In essence Iran is fallaciously reinterpreting the JCPOA so as to eliminate the 130 tonnes cap, as long as it states that it is seeking an international buyer. As Iran continues to make heavy water, it is expected to once again have more than 130 metric tonnes of heavy water inside Iran by May or June. The Trump administration should look at Iran's recent statement as both a compliance issue and an attempt to extort more heavy water sales. It should make clear at the Joint Commission that Iran is simply wrong to continue this practice. Any excess heavy water over 130 tonnes should be blended down into normal water. Heavy water is not radioactive and it can be simply thrown into a river.

These Iranian actions and statements serve to highlight a far deeper problem in the way the heavy water cap was implemented under the Obama administration. Rightfully, the cap should apply to all the heavy water Iran owns and controls, whether in or outside Iran. In secret, the Joint Commission acted so as to exempt Iranian heavy water held overseas. The problem goes back to before Implementation Day, when the Joint Commission undertook several moves that served to conciliate and redress potential Iranian violations of the JCPOA which undermined the cap and provided Iran with financial incentives and even uranium it did not deserve. As referenced above, on January 14, 2016, shortly before Implementation Day, the Joint Commission allowed Iran to send out heavy water in excess of the 130 metric tonnes cap, with the expectation that it would be sold to a buyer and delivered expeditiously, rather than blending down the heavy water to normal water as a sounder interpretation of the deal would require. Under this decision, Iran apparently exported about 50 metric tonnes of heavy water to Oman for consignment while awaiting a buyer, which turned out to be the United States and Russia, two countries that did not need the heavy water and had little reason to subsidize and legitimize Iran's heavy water production. The only purpose would have been a swiftly orchestrated effort

⁴ U.S. Department of Treasury, "Treasury Sanctions those Involved in Ballistic Missile Procurement for Iran," January 17, 2016, <https://www.treasury.gov/press-center/press-releases/Pages/j10322.aspx>

⁵ United Nations Security Council, *Resolution 1718 (2006)*, S/RES/1718 (2006), October 14, 2006.

⁶ *Communication dated 3 March 2017 received from the Permanent Mission of the Islamic Republic of Iran to the Agency regarding the report of the Director General on verification and monitoring in Iran*, INFCIRC/915, March 16, 2017. <https://www.iaea.org/sites/default/files/publications/documents/infcircs/2017/infcirc915.pdf>

to help Iran avoid being in violation of the JCPOA on Implementation Day, or under a more cynical reading, part of a payoff to Iran to stay in compliance.

In the months lead-up to Implementation Day, the United States should have instead asked Iran whether it in fact had an international buyer for the excess heavy water that could take possession prior to Implementation Day. If not, the United States would have been far wiser to simply tell Iran to address the problem. Iran could have decided to throw the excess into a nearby river or be in violation of the deal on Implementation Day. Instead, the United States sought to solve Iran's compliance problem and acquiesced to what *de facto* amounted to paying Iran to do so. Russia repeated the mistake but in return for a shipment of heavy water it received, Russia provided Iran with 149 metric tonnes of natural uranium.⁷

On two separate occasions after this initial export of 50 tonnes, Iran subsequently exported about 31 metric tonnes of heavy water to Oman. No Joint Commission decisions have yet been made available authorizing these subsequent shipments. But Iran felt comfortable exporting the heavy water, as if the cap applied only to what it held in Iran rather than to the more accurate and reasonable standard of what it owns and controls in total.⁸

To fix this compliance issue, the Trump administration should make clear that the 130 metric tonnes cap applies to all the heavy water Iran owns and controls, whether in or outside Iran. But it needs to take further action about any Iranian heavy water stored in Oman.

A literal reading of the JCPOA would conclude that the shipments of Iranian heavy water from Oman to the United States and Russia should have been subject to approval by the Procurement Working Group. Oman should have submitted a proposal to the Procurement Working Group (PWG) for approval. It did not do so.

The PWG is a Joint Commission body set up at the United Nations to administer and approve or not approve proposals by countries seeking to participate in or permit certain transfers of nuclear or nuclear dual-use goods and technology, or engage in nuclear or nuclear related transactions *for the benefit of Iran* (italics added). Heavy water is a nuclear good on Part 1 of the Nuclear Suppliers Group (NSG) list, and the onward transfer of Iranian heavy water by Oman clearly benefits Iran, a key condition listed in the relevant section of the nuclear deal discussing the Joint Commission approvals of exports and transfers of goods (JCPOA paragraph 6.1 of annex IV, see footnote below),⁹ even though the heavy water originated in Iran. As a result, under the nuclear

⁷ "AP Exclusive: Diplomats: Iran to Get Natural Uranium Batch," The Associated Press. January 9, 2017, <http://bigstory.ap.org/article/db5a8d6cad764c208322939ed84a0d49> It turned out that there was a second shipment that brought the total to 149 metric tonnes.

⁸ More information about the heavy water exports can be found in, *Heavy Water Loophole in the Iran Deal*, by David Albright and Andrea Stricker, Institute for Science and International Security Report, December 21, 2016. <http://isis-online.org/isis-reports/detail/heavy-water-loophole-in-the-iran-deal>

⁹ Under 6.1. of annex IV of the JCPOA:

With the purpose of establishing a procurement channel, the Joint Commission will, except as otherwise provided by the United Nations Security Council resolution endorsing this JCPOA, review and decide on proposals by states seeking to engage in: 6.1.1. the supply, sale or transfer directly or indirectly from their territories, or by their nationals or using their flag vessels or aircraft to, or for the use in or benefit of,

deal, Iranian heavy water transfers from Oman to a foreign customer should require a proposal from the government of Oman subject to PWG review. Of course, the Obama administration would not have blocked such a proposal, but this expectation should not excuse the lack of a proposal or use of this mechanism in the future. The Trump administration should make clear that Oman's lack of an official proposal would violate the Iran deal's provisions. Moreover, the new administration should move to end the Oman heavy water loophole in its entirety. The cap should be viewed as a hard cap where heavy water in excess of 130 metric tonnes must be blended down. Although Iran can sell its heavy water internationally, any such sale should not lead to Iran owning or controlling more than 130 metric tonnes of heavy water, whether in Iran or abroad.

It should also be noted that the Trump administration should make no further U.S. purchases of Iran's heavy water. My Institute has written in a separate report that the purchases serve to undermine the creation of a stable North American supply chain that is under development and legitimize Iran as a nuclear supplier before it has earned that distinction.

Centrifuge Research and Development (R&D) Issues

One of the more pressing compliance issues involves Iran's centrifuge R&D program. Although the publicly known violations are not that significant, they do illustrate Iran's frequent low level cheating on the JCPOA.

There are allegations that Iran is exploiting allowed "quality assurance" criteria at Kalaye Electric for centrifuge rotor assembly to conduct additional mechanical testing of centrifuges beyond that allowed under the JCPOA.

Iran is also operating IR-6 centrifuges in excess of the limit of "roughly 10" allowed, choosing to interpret this condition as allowing 15 to operate. A limit of 10 plus or minus one may make sense but Iran's interpretation is not supported by the JCPOA.

Iran's Denial of Access to the IAEA

One of the most serious compliance issues concerns Iran's on-going refusal to allow the IAEA to access military sites and interview personnel. The access was sought before the JCPOA to settle issues associated with the Iran's past nuclear weapons efforts. In one key case, the IAEA wanted to visit Sharif University, a site linked to past undeclared nuclear activities. Evidently, it was not allowed to do so; it stated that it satisfactorily obtained answers to its questions from Iran. One has to ask if this outcome is indeed satisfactory and not the result of backing down from creating a compliance crisis over Iranian intransigence regarding access. Access to military sites is needed after Implementation Day as part of reaching a broader conclusion under the Additional

Iran, and whether or not originating in their territories, of all items, materials, equipment, goods and technology set out in INFCIRC/254/Rev.12/Part 1.

Since heavy water in amounts greater than 0.2 metric tons is subject to Part 1 of the NSG and Iran benefits from the retransfer of heavy water from Oman to a customer, this provision appears to require Oman to submit a proposal to the PWG for each heavy water shipment from its territory to an overseas customer. It has not done so.

Protocol and verifying nuclear weapons development bans in the JCPOA (section T of Annex 1). Because of fears that such access requests could torpedo the JCPOA, the IAEA and the Obama administration have resisted pushing Iran to allow access to military sites. Therefore, the JCPOA remains largely unverified by the IAEA on the nuclear weapons development side.

Under the comprehensive safeguards agreement, the IAEA has the right to visit any site in Iran, whether military or civilian in furtherance of its safeguards obligations to ensure that the Iranian nuclear program is peaceful. Iran has challenged this right and frequently denied inspectors access to sites and individuals.

Section T of Annex 1 of the JCPOA contains bans on Iranian nuclear weaponization activities, namely activities which could contribute to the design and development of a nuclear explosive device.¹⁰ The IAEA has the authority under UNSC resolution 2231 to request access to sites associated with these section T bans. The resolution “requests the Director General of the IAEA to undertake the necessary verification and monitoring of Iran’s nuclear-related commitments for the full duration of those commitments under the JCPOA.” In addition, the resolution states: “The International Atomic Energy Agency (IAEA) will be requested to monitor and verify the voluntary nuclear-related measures as detailed in this JCPOA.” These section T bans remain unverified in the absence of IAEA visits to military and other sites.

In addition, fear of derailing the JCPOA negotiations or the agreement itself led to a poorly designed arrangement between Iran and the IAEA on investigating and drawing conclusions about alleged nuclear weapons-related high explosive work at a site at the Parchin military complex. Not surprisingly, this weak arrangement in which the IAEA was limited in its visits and sample taking at the site, failed to resolve the issue. Moreover, it put the IAEA in a weaker position to access the Parchin site in the future to resolve this issue, which includes making sense out of uranium particles detected by environmental sampling taken the one time the IAEA visited the site. The presence of these particles combined with many previous, suspicious site alterations by Iran are dramatic evidence that Iran likely conducted secret nuclear weapons activities at Parchin, despite Iran’s on-going denials. However, the IAEA has not been able to make that conclusion. Access also makes sense as part of the IAEA reaching a broader conclusion or verifying nuclear weapons development bans. It should be able to further investigate the Parchin case, deploying its special verification expertise. It should also be

¹⁰ Section T, Annex 1, JCPOA:

ACTIVITIES WHICH COULD CONTRIBUTE TO THE DESIGN AND DEVELOPMENT OF A NUCLEAR EXPLOSIVE DEVICE

82. Iran will not engage in the following activities which could contribute to the development of a nuclear explosive device:

82.1. Designing, developing, acquiring, or using computer models to simulate nuclear explosive devices.

82.2. Designing, developing, fabricating, acquiring, or using multi-point explosive detonation systems suitable for a nuclear explosive device, unless approved by the Joint Commission for non-nuclear purposes and subject to monitoring.

82.3. Designing, developing, fabricating, acquiring, or using explosive diagnostic systems (streak cameras, framing cameras and flash x-ray cameras) suitable for the development of a nuclear explosive device, unless approved by the Joint Commission for non-nuclear purposes and subject to monitoring.

82.4. Designing, developing, fabricating, acquiring, or using explosively driven neutron sources or specialized materials for explosively driven neutron sources.

facilitated in accessing key individuals and additional sites, including those near the Parchin high explosive bunker and relevant manufacturing sites. It may well find other important information.

Inhibition of Investigation into Iran's Past Military Nuclear Program. As part of the JCPOA, the Obama administration and its counterparts in the P5+1 in effect gave away via an unrealistic deadline, the IAEA's ability to resolve its concerns about Iran's past nuclear weapons work, referred to in shorthand as the possible military dimensions (or PMD) of its nuclear programs. This is reflected by the IAEA's sparse report and investigation into Iran's past nuclear weapons program issued in December 2015. It is underlined by IAEA's inability to access Iranian military sites and individuals. It also involved Iranian refusal to provide answers to IAEA questions; part of the refusal of access was reportedly to prevent the risk of Iranians making contradictory statements that could serve to uncover past undeclared activities and create a lengthy investigation that would extend well past the Obama administration's plan to implement the agreement in January 2016. To this day, the IAEA has not been able to state that Iran has addressed its concerns and questions about past nuclear weapons activities or to determine the exact status of what Iran achieved and may have hidden away.

The Trump administration should insist that the IAEA revisit the issue of the past military nuclear program through its effort to reach the broader conclusion under the Additional Protocol. This is imperative to ensuring Iran's past military nuclear program has truly ended, a key aspect of determining that Iran's nuclear program is truly peaceful.

These denials of access would not be tolerated by the IAEA or international community in other nonnuclear weapon states with comprehensive safeguards agreements. Denial of access would be rightly called a major violation. The Obama administration decided to ignore Iran's actual and potential obstacles to the IAEA's right to visit military sites. However, the Trump administration should no longer ignore Iran's intransigence on this critical issue.

Stricter Interpretations Needed for an Acceptable Deal

The implementation of the JCPOA has highlighted a number of loopholes in the deal.

Natural Uranium Imports. The Procurement Working Group recently allowed Iran to acquire 149 metric tonnes of natural uranium in payment for Iranian heavy water exported to Russia instead of cash. The receipt of this uranium, which contributes to building Iran's nuclear capability, is an added benefit Iran did not deserve. Iran's nuclear chief proclaimed that this decision would allow Iran to have 60 percent more stockpiled uranium than it did prior to the JCPOA. Ali Akbar Salehi, the head of the Atomic Energy Organization of Iran, was quoted by the semi-official Fars News Agency stating that Iran would receive a final batch of 149 metric tonnes of natural uranium, in addition to 210 metric tonnes already delivered since early 2016. The 149 metric tonnes of uranium were received instead of a cash payment for part of its cache of heavy water in Oman, heavy water that should have instead been blended down into normal water, if the deal had been seriously enforced. Interestingly, the caching of heavy water in Oman and the decision to approve sending natural uranium to Iran were considered secret by the Joint Commission and the Obama administration. These 149 metric tonnes, if enriched to weapon-grade uranium, would be enough for over 15 nuclear weapons.

Iran also sought to import 950 metric tonnes of natural uranium from Kazakhstan in an effort that was blocked by Britain. This sale was being negotiated in secret late last fall and in the early winter. According to an official of one government of the P5+1, this uranium was being offered as part of Iran accepting an arrangement that would blend down much if not all of the low enriched uranium held-up in its Enriched UO² Powder Plant (EUPP). Iran wanted the pre-approval of the Joint Commission for this large import of natural uranium and subsequent conversion of about a third of it into uranium hexafluoride. However, Britain blocked the effort during the last months against the wishes of the Obama administration. Iran subsequently decided to make this case public, including identifying Britain as obstacle of the export to Iran. Iran's motivation for doing so is unclear, but it likely has not given up trying to obtain the uranium.

The Trump administration should thank Britain for its decision and further block any further Iranian efforts to stockpile natural uranium. Not only does Iran not need this uranium, but its export to Iran would substantially benefit Iran's nuclear program and help legitimize a large nuclear program that is inimical to U.S. goals in the region. Moreover, once the JCPOA ends, a program that was running low on uranium to run enrichment efforts would be well poised to continue and expand them.

Suspicious Nuclear Procurement Efforts

The Atomic Energy Organization of Iran has sought sensitive nuclear-related materials and facilities beyond what it needs or should get. In at least two cases, the requests could have been tests of the JCPOA's nuclear and nuclear-related goods procurement channel and a supplier country's ability to police the channel. Under the deal, Iran is viewed as being able to ask for whatever it wants as far as nuclear or nuclear-related goods from overseas and does not have to report the request to the Joint Commission. Suppliers must seek permission for sales from their governments, which then send a proposal to the Procurement Working Group, which is the final arbiter of the export. Although in the two cases referenced, a government detected and made clear its intention to deny the suppliers both exports, Iran could repeat the pattern in other countries, testing other countries' systems of controls and their processes of submitting requests to the PWG. In this way, this loophole lays the basis for Iran to find less scrupulous suppliers and countries that will eventually make unauthorized sales. Armed with this knowledge, Iran would be far better positioned to find those able and willing to assist secret Iranian illicit procurements of controlled dual-use goods for its nuclear, missile, or other military programs. If it is caught making these requests, it can claim it is not violating the deal. If it receives any of the controlled goods, it may have violated the JCPOA and its PWG's rules. However, there is no mechanism to demand Iran return ill-gotten goods. Iran can also claim it made the import by mistake or insist that the goods are for a civilian, non-nuclear program and should be treated as an insignificant or nonexistent violation.

The United States should recognize this Iranian practice of seeking goods as inconsistent with the JCPOA and likely intended as a scheme to aid in the violation of the JCPOA and UNSC resolution 2231. It should insist that Iran report any further requests for nuclear or nuclear-related goods to the Joint Commission and Procurement Working Group.

Cap on Low Enriched Uranium (LEU)

Iran is limited to 300 kilograms (kg) of low enriched uranium hexafluoride (LEU with less than 3.67 percent uranium 235). Iran has sought and received exemptions to this cap in the form of enriched uranium in low level waste and likely in EUPP LEU holdup that is not blended down.

Iran would like additional exemptions to this cap. In particular, it would like to undertake domestic research, development, and testing of enriched uranium fuel for nuclear power reactors. This effort could involve hundreds, if not metric tonnes, of LEU that would be produced in the Natanz enrichment plant and exempted from the cap. The JCPOA controls this activity under section J of Annex 1 of the JCPOA, and this section should be interpreted strictly to prevent Iran from exempting LEU for any domestic production of fuel for nuclear power reactors.¹¹ In practical terms, Iran could not produce LEU fuel for power reactors that would meet a reasonable interpretation of section J. With that recognition, further exemptions to the 300 kilograms enriched uranium cap should be deferred indefinitely, except in the case of LEU fuel for Iran's modified Arak reactor.

Naval Reactors and Extra Enrichment Loopholes

Iran is seeking to exploit a loophole in reactor restrictions involving naval propulsion reactors. The United States should make clear that it interprets the JCPOA as banning the research and development of naval propulsion reactors, including land prototypes.

Iran has also sought to avoid the 300 kg cap on LEU by enriching depleted uranium to natural uranium. Because this activity is enrichment, the product (albeit natural uranium) should be considered part of the 300 kilogram LEU cap.

Export Controls

According to the JCPOA, "Iran *intends* to apply nuclear export policies and practices in line with the internationally established standards for the export of nuclear material, equipment and technology (emphasis added)."¹² Iran has not committed to do so, and Tehran could interpret this condition far differently than the United States.

¹¹ According to section J, Annex 1, JCPOA:

Enriched uranium in fabricated fuel assemblies and its intermediate products manufactured in Iran and certified to meet international standards, including those for the modernised Arak research reactor, will not count against the 300 kg UF₆ stockpile limit provided the Technical Working Group of the Joint Commission approves that such fuel assemblies and their intermediate products cannot be readily reconverted into UF₆. This could for instance be achieved through impurities (e.g. burnable poisons or otherwise) contained in fuels or through the fuel being in a chemical form such that direct conversion back to UF₆ would be technically difficult without dissolution and purification. The objective technical criteria will guide the approval process of the Technical Working Group.

¹² JCPOA, Annex 1, par. 73: "Iran intends to apply nuclear export policies and practices in line with the internationally established standards for the export of nuclear material, equipment and technology. For 15 years, Iran will only engage, including through export of any enrichment or enrichment related equipment and technology, with

As part of creating a strategic trade control regime in Iran, the United States should also interpret the JCPOA as stating that Iran will commit not to conduct illicit commodity trafficking for government controlled or owned military, missile, nuclear, or other industries and programs, and it will agree to enforce this ban on private Iranian companies. Conducting illicit commodity trafficking is not in line with internationally established standards for strategic trade control systems.

The United States should request regular UN reporting on Iran's progress in establishing strategic export controls that meet international standards. The United States and its counterparts in the P5+1 should cooperate with the United Nations Secretariat to ensure that its reporting on Iran's efforts to conduct illicit commodity trafficking for its military, nuclear, missile, or other industries is more fulsome. The Facilitator of resolution 2231 stated in its last report that it "received no information regarding alleged actions inconsistent with resolution 2231 (2015)," yet the Facilitator went on to identify potential violations on its own. It is worth noting that the report does not cover Iranian missile launches.¹³

Stricter Enforcement against Past and On-Going Iranian Violations of U.S. Laws

The Trump administration should aggressively seek to detect, interdict, and otherwise thwart Iran's illicit procurement efforts that violate national laws. In particular, the Department of Justice and Department of Homeland Security should more aggressively investigate, indict, and extradite those involved in outfitting Iran's nuclear, missile, or conventional weapons programs in defiance of U.S. laws and sanctions.

During the last administration, there were excessive denials or non-processing of extradition requests and lure memos out of a misplaced concern about their effect on the Iran nuclear deal. These actions, largely concentrated in the State Department, reportedly interfered with investigations. The denials, delays, and hold-ups served to discourage new or on-going federal investigations of commodity trafficking involving Iran. The new administration should have a policy of encouraging investigations of Iranian illicit commodity trafficking efforts that includes a determined extradition and lure process. If feasible, past Iran-related lure and extradition requests held up or denied by the previous administration should be approved.

Final Word: Judging Compliance

Some have tried to state that the IAEA has judged Iran in compliance with the JCPOA. However, making this determination is not the responsibility of the IAEA. Moreover, IAEA quarterly reporting does not make such broad judgements.

any other country, or with any foreign entity in enrichment or enrichment related activities, including related research and development activities, following approval by the Joint Commission."

¹³ *Second six-month report of the Facilitator on the implementation of Security Council Resolution 2231 (2015)*, S/2017/49, January 18, 2017.

The latest IAEA report states, as have previous ones: “Since Implementation Day, the Agency has been verifying and monitoring the implementation by Iran of its nuclear-related commitments” under the Iran deal. Nowhere in the report does the IAEA state that it has judged Iran as fully compliant with the JCPOA. The IAEA report lists many areas where Iran has met the conditions of the JCPOA’s provisions. Sometimes it reports on violations, such as on the amount of heavy water in Iran. However, many of the issues I have discussed here are not included in the IAEA reporting but should be. Moreover, the IAEA regularly states that it is still unable to determine the absence of undeclared nuclear material and activities in Iran, and thus unable to provide assurance that Iran’s nuclear program is truly peaceful. Although the IAEA is a critical source of information about compliance, it is not the determiner of whether Iran is complying with the JCPOA.

The issue of judging compliance is rightly the responsibility of the Joint Commission and each country of the P5+1. As the leading negotiator of the JCPOA, the United States has a special responsibility to thoroughly evaluate Iran’s compliance with the nuclear deal. The Trump administration needs to carefully review Iran’s compliance with the JCPOA and UNSC resolution 2231. It can look freshly at the issue and provide a more objective review than done previously.

Under the Iran Nuclear Agreement Review Act of 2015, the President must certify every 90 days that Iran is: transparently, verifiably, and fully implementing any agreement; Iran has not committed a material breach, or if it has, that it has cured such a breach; and Iran has not taken any action, including covert action, that could significantly advance its nuclear weapons program. The next certification is due this April. It is not clear that the new administration, as short-staffed as it is so far, can yet realistically perform a new review. But by this summer or fall, a more fulsome review should be possible.

So far, however, in my view, it is not possible to judge Iran in full compliance with the JCPOA, and Iran is flirting with violations in several areas. It is fair to conclude that Iran is not in compliance with the arms and ballistic missile provisions of UNSC resolution 2231. However, it is difficult to argue that Iran has so violated the JCPOA’s or UNSC resolution 2231’s provisions as to justify snapping back sanctions. Nonetheless, the administration should review violations as part of its Iran policy review and make a judgment based on that assessment. As part of that effort, the United States should start to publicize Iranian non-compliance to date with the JCPOA and UNSC resolution 2231. By doing so, it will lay a stronger basis for not tolerating future violations and build a broader international awareness of such violations and make it easier to rectify them. If this deal is to succeed, let alone survive, the Trump administration will need to take aggressive actions to adequately enforce the JCPOA and UNSC resolution 2231. Towards a policy of stricter enforcement, the administration should announce that the United States will demonstrate zero tolerance for Iranian violations of the JCPOA and resolution 2231 and will respond both within and outside the context of these agreements. Where violations are significant, the United States should start the process of snapping back US and UN sanctions.

**Committee on Oversight and Government Reform
Witness Disclosure Requirement — “Truth in Testimony”**

Pursuant to House Rule XI, clause 2(g)(5) and Committee Rule 16(a), non-governmental witnesses are required to provide the Committee with the information requested below in advance of testifying before the Committee. You may attach additional sheets if you need more space.

Name: **David Albright**

1. Please list any entity you are testifying on behalf of and briefly describe your relationship with these entities.					
Name of Entity	Your relationship with the entity				
Institute for Science and International Security	President				
2. Please list any federal grants or contracts (including subgrants or subcontracts) you or the entity or entities listed above have received since January 1, 2015, that are related to the subject of the hearing.					
Recipient of the grant or contact (you or entity above)	Grant or Contract Name	Agency	Program	Source	Amount
Institute for Science and International Security	Lessons from South Africa	Naval Post Graduate School	PASCC	Department of Defense	\$105,542
2. Please list any payments or contracts (including subcontracts) you or the entity or entities listed above have received since January 1, 2015 from a foreign government, that are related to the subject of the hearing.					
Recipient of the grant or contact (you or entity above)	Grant or Contract Name	Agency	Program	Source	Amount
none					

I certify that the information above and attached is true and correct to the best of my knowledge.

Signature *David Albright*

Date: April 3, 2017

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David Albright, President of the Institute for Science and International Security

David Albright, a physicist, is founder and President of the non-profit Institute for Science and International Security in Washington, D.C. He directs the project work of the Institute, heads its fundraising efforts, and chairs its board of directors. In addition, he regularly publishes and conducts scientific research. He has written numerous assessments on secret nuclear weapons programs throughout the world. During his career, Albright has testified numerous times on nuclear issues before the U.S. Congress. He has spoken to many groups, technical workshops and conferences, briefed government decision-makers, and trained many government officials in non-proliferation policy making. The media frequently cite Albright, and he has appeared often on television and radio. Albright has co-authored five books, including the most recent *Revisiting South Africa's Nuclear Weapons Program* and 2010's *Peddling Peril: How the Secret Nuclear Trade Arms America's Enemies*, listed by *The Atlantic* as one of the best foreign affairs books of 2010.

Biography of David Albright

[David Albright](#), a physicist, is founder and President of the non-profit Institute for Science and International Security in Washington, D.C. He directs the project work of the Institute, heads its fundraising efforts, and chairs its board of directors. In addition, he regularly publishes and conducts scientific research. He has written numerous assessments on secret nuclear weapons programs throughout the world.

Albright has published assessments in numerous technical and policy journals, including the *Bulletin of the Atomic Scientists*, *Science*, *Scientific American*, *Science and Global Security*, *Washington Quarterly*, and *Arms Control Today*. Research reports by Albright have been published by the Environmental Policy Institute in Washington, D.C. and Princeton University's Center for Energy and Environmental Studies.

Albright has co-authored five books, including the groundbreaking *World Inventory of Plutonium and Highly Enriched Uranium, 1992*, (SIPRI and Oxford University Press) written in collaboration with Frans Berkhout, of Sussex University, and William Walker, of the University of St. Andrews. A second, greatly-expanded edition entitled *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities and Policies* was published in March 1997. Albright is also a co-editor and contributor to *Challenges of Fissile Material Control* (Institute Press, 1999) and *Solving the North Korean Nuclear Puzzle* (Institute Press, 2000), which one leading expert on North Korea called "the definitive unclassified analysis of the North Korean nuclear program." In 2010, Free Press published his book *Peddling Peril: How the Secret Nuclear Trade Arms America's Enemies*. It was listed by *The Atlantic* as one of the best foreign affairs books of 2010. His latest book is *Revisiting South Africa's Nuclear Weapons Program: Its History, Dismantlement, and Lessons for Today*.

During his career, Albright has testified numerous times on nuclear issues before the U.S. Congress. He has spoken to many groups, technical workshops and conferences, briefed government decision-makers, and trained many government officials in non-proliferation policy making. The media frequently cite Albright, and he has appeared often on television and radio. A *National Journal* profile in 2004 called him a "go-to guy for media people seeking independent analysis on Iraq's WMD programs."

Albright has been cited often in the media and appeared frequently on television and radio. He has been cited regularly in the *New York Times*, *Washington Post*, *USA Today*, *Los Angeles Times*, *Newsweek*, *Time*, *Washington Times*, *Boston Globe*, *Chicago Tribune*, *London Sunday Times*, *Guardian*, *Die Zeit*, *Ashi Shimbun*, *Der Spiegel*, *Stern*, and *Times of India* and by Reuters, Associated Press, AFP and Bloomberg wire services. Albright has also appeared many times on CNN, FOX, MSNBC, ABC World News Tonight, NBC Nightly News, CBS Evening News, Newshour with Jim Lehrer, 60 Minutes, Dateline, Nightline and multiple National Public Radio shows.

Albright cooperated actively with the IAEA Action Team from 1992 until 1997, focusing on analyses of Iraqi documents and past procurement activities. In June 1996, he was the first non-governmental inspector of the Iraqi nuclear program. On this inspection mission, Albright

questioned members of Iraq's former uranium enrichment programs about their statements in Iraq's draft Full, Final, and Complete Declaration. In the spring of 2003, after the fall of Baghdad, he initiated a successful effort to retrieve the only complete set of classified Iraqi documents, hidden since the 1991 Gulf War, about making gas centrifuges to enrich uranium for nuclear weapons.

From 1990 to 2001, Albright was a member of the Health Advisory Panel appointed by Colorado Governor Roy Romer. The Panel, responsible to the state's Health Department, oversees a historical assessment of the toxicological and radiological doses received by the population near the Rocky Flats nuclear weapons production site. On this panel, Albright oversaw the development of 'source' terms, which describe the type and amount of dangerous materials that left the plant during daily releases, accidents, or large-scale fires.

In 1996, Albright was appointed to the Department of Energy Openness Advisory Panel, which operates under the auspices of the Secretary of Energy Advisory Board. The panel is charged with reviewing the Department's Openness policy, which was started in 1993, with the aim of lifting the veil of Cold War secrecy that has surrounded many of the DOE's activities without jeopardizing national security.

Prior to founding the Institute, he worked as a Senior Staff Scientist at the Federation of American Scientists and as a member of the research staff of Princeton University's Center for Energy and Environmental Studies. In the early 1980s, he taught physics at George Mason University in Virginia. He has served as a consultant or contractor to the Environmental Policy Institute, the Congressional Research Service, the International Task Force on Prevention of Nuclear Terrorism, Los Alamos National Laboratory, and the International Atomic Energy Agency.

He is an American Physical Society (APS) Fellow. He was the 2006 recipient of the APS's Joseph A. Burton Forum Award. He received a 1992 Olive Branch Award for a series of articles he wrote, along with Mark Hibbs, on the Iraqi nuclear weapons program for the *Bulletin of the Atomic Scientists*. He was also a *Bulletin* contributing editor and was a guest editor of special editions of the magazine.

Prior to founding the Institute in 1993, Albright was a Senior Staff Scientist at the Federation of American Scientists and a member of the research staff of Princeton University's Center for Energy and Environmental Studies. In the early 1980s, he taught physics at George Mason University. Albright received a Masters of Science in physics from Indiana University in 1980, a Masters of Science in mathematics from Wright State University in 1977, and a Bachelor of Science from Wright State University in 1975. In addition to the Outstanding Alumni Award, Albright also received an Honorary Doctorate of Humane Letters from Wright State University in 2007.