Statement of Lt. Gen. Frank G. Klotz, USAF (Ret.)
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on the
Status of JCPOA Implementation and Related Issues
Before the Senate Foreign Relations Committee
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Chairman Corker, Ranking Member Cardin, and Members of the Committee, thank you for the opportunity to discuss the status of implementation of the Joint Comprehensive Plan of Action (JCPOA) reached between the P5+1 (China, France, Germany, Russia, the United Kingdom, and the United States), the European Union, and Iran. I appreciate the opportunity to be here to discuss the role the Department of Energy (DOE) plays in support of the Administration's implementation of the JCPOA. The JCPOA provides unprecedented verification of Iran's nuclear program to ensure that Iran does not obtain a nuclear weapon. As we move toward and beyond Implementation Day, the technical expertise within DOE, including the National Nuclear Security Administration (NNSA), and at our national laboratories will be called upon to ensure that Iran meets all of its nuclear commitments.

As Secretary Moniz has said, the JCPOA ensures that Iran's nuclear program is exclusively peaceful, provides unprecedented verification measures, constrains Iran's nuclear program in a manner that give us ample time to respond if Iran chooses to violate its terms, and takes none of our options off the table.

As noted by Ambassador Mull, the Department of State is leading the Administration's efforts to oversee implementation of the JCPOA. DOE, including NNSA, plays an important role by providing technical support to implementation efforts. In addition, the Department and its national laboratories will continue to provide technical support and analysis throughout implementation of the JCPOA to help ensure that Iran carries out its commitments.

I will detail for you a few examples of the technical support to JCPOA implementation that the Department is providing.

- The JCPOA blocks Iran's pathway to producing and using nuclear weapons-grade plutonium by requiring the rebuilding and redesign of the Arak Reactor, effectively eliminating a potential source of weapons grade material. The calandria, or reactor core, from the old design will be filled with concrete and made inoperable. The JCPOA calls for a working group to cooperate with Iran to develop the final design of the modernized reactor, and provides for the final design of the reactor to be approved by the Joint Commission. DOE/NNSA technical experts will provide technical support and review the design of the modernized reactor as well as analyze the fuel design and safety standards to verify that it conforms to the characteristics set forth in the JCPOA, including that Iran cannot use this reactor for prohibited purposes.

- The JCPOA establishes a process for review and approval of procurement by Iran of specified nuclear-related items. This process is conducted through a Procurement

Working Group of the Joint Commission. Technical experts in NNSA's Office of Nonproliferation and Arms Control will review and make recommendations to the Department of State, which coordinates the U.S. government efforts regarding the Procurement Working Group, on such procurement proposals. The JCPOA prohibits any procurement by Iran of these items outside the Procurement Working Group process.

- As Secretary Moniz has noted, the JCPOA provides the most rigorous inspections that we have ever had in Iran. DOE/NNSA's technical expertise and training supports the International Atomic Energy Agency's (IAEA) monitoring and verification activities that will be important to ensuring that Iran carries out its commitments under the JCPOA. DOE/NNSA is highly engaged with the IAEA in providing training, technologies, and people to support this critical organization.

The IAEA is responsible for applying international nuclear safeguards, through which the IAEA is able to confirm to the international community that nuclear material and facilities are not being used for the illicit manufacture of nuclear weapons. Nuclear safeguards include, for example, on-site inspections, nuclear material accountancy, physical measurements, containment and surveillance, and environmental sampling.

Let me take a moment to expand on the support that DOE/NNSA provides to the IAEA, and share with the Committee a few examples of the substantial nuclear safeguards work that we support. Every year, the Department hosts training courses for IAEA inspectors and analysts on a wide range of topics including measuring nuclear materials, inspector access under the Additional Protocol, advanced plutonium verification, enrichment technology, export controls and commodity identification. These courses are organized and implemented with the support of experts from our national laboratories and take place in the United States, at IAEA facilities in Vienna, and at international nuclear facilities in collaboration with other IAEA Member States. For example, every new IAEA inspector since 1980 has had nuclear materials measurement training at the Los Alamos National Laboratory, in New Mexico.

The Department's national laboratories have played a major role in developing and improving safeguards technologies and providing expertise since the IAEA's inception in 1957. They develop and transfer various technologies to the IAEA for use in safeguards systems all over the world. This equipment goes through a rigorous evaluation process by the IAEA before being accepted into routine use, including vulnerability analyses by independent parties. The On-line Enrichment Monitor (OLEM), developed by the Oak Ridge National Laboratory, Los Alamos National Laboratory, the Pacific Northwest National Laboratory and the IAEA, is one example of a technology jointly developed by our national laboratories and the IAEA. The OLEM is an innovative safeguards technology that can be used to continuously monitor the enrichment levels of uranium in gaseous form at a centrifuge enrichment plant. In other words, it will allow the IAEA to determine if Iran enriches above permitted levels. And for the first time, as a result of the JCPOA, OLEM can be used in Iran.

In addition to our training and safeguards technology cooperation, five of the Department's national laboratories participate in the IAEA's Network of Analytical Laboratories, or NWAL, a network of 20 laboratories in 10 countries that provide analytical services to the IAEA. These

laboratories undergo a rigorous qualification process by the IAEA to ensure that they maintain the highest quality standards. While the IAEA analyzes material and environmental samples at its laboratory in Seibersdorf, Austria, the agency also relies upon its NWAL to assist in sample analysis for logistical purposes, quality control and to have access to state-of-the-art techniques. Environmental sampling, in particular, is a very powerful tool that the IAEA uses to determine if undeclared activities are occurring. The IAEA relies on the U.S. laboratories that are part of the NWAL because of our world class capabilities for high-precision analysis and quality control.

Finally, the United States provides personnel to the IAEA to support the IAEA's Department of Safeguards in a variety of areas, including technology development, information and statistical analysis, and development of safeguards approaches. As of June, approximately 10 percent of the workforce of the IAEA's Department of Safeguards was from the United States, and many of these Americans have worked for DOE or our national laboratory system. We are proud of the assistance we provide and the close collaboration we have with the IAEA.

JCPOA is not built on trust. It is built on hard-nosed requirements that will limit Iran's activities and ensure access, transparency, and verification. The Department takes seriously its participation in efforts to implement the JCPOA and help to ensure that Iran carries out its commitments under the deal, whether that is participating in the Administration's implementation efforts or supporting the IAEA.

Thank you for the opportunity to be here. I look forward to answering your questions.