

**MEMORANDUM OF COOPERATION
ON THE
NUCLEAR SAFETY OF THE
WESTINGHOUSE AP1000 NUCLEAR REACTOR
BETWEEN
THE UNITED STATES NUCLEAR REGULATORY COMMISSION
AND
THE NATIONAL NUCLEAR SAFETY ADMINISTRATION
OF THE PEOPLE'S REPUBLIC OF CHINA**

WHEREAS, the United States Nuclear Regulatory Commission (NRC) and the National Nuclear Safety Administration of the People's Republic of China (NNSA) have a mutual interest in continuing to exchange information pertaining to regulatory activities and standards required or recommended by their organizations for the regulation of safety and environmental impacts of nuclear facilities and have a common objective of improving the safety of nuclear facilities and materials and of protecting public health and safety and the environment;

WHEREAS, the NRC and NNSA, in accordance with and subject to the Agreement Between the Government of the People's Republic of China and the Government of the United States of America on Cooperation in Science and Technology, signed at Washington on January 31, 1979, are already engaged in general cooperation in nuclear safety matters under the Protocol Between the Nuclear Regulatory Commission of the United States of America and the National Nuclear Safety Administration of the People's Republic of China on Cooperation in Nuclear Safety Matters, signed at Washington on July 11, 2013 (the Protocol);

WHEREAS, the NRC and NNSA are also engaged in cooperation specific to the Westinghouse Advanced Pressurized Reactor (AP1000) under the Memorandum of Further Cooperation on Nuclear Safety of the Westinghouse AP1000 Nuclear Reactor Between the Nuclear Regulatory Commission of the United States of America and the National Nuclear Safety Administration of the People's Republic of China, signed at Beijing on May 25, 2010 (the 2010 MOC);

WHEREAS, the NRC and NNSA, under the terms of the Protocol and the 2010 MOC, have been engaged in an exchange of information and exchange of personnel for the purposes of training on AP1000 construction oversight;

THEREFORE the NRC and NNSA intend this supplemental Memorandum of Cooperation to further expand their cooperation on activities associated with the AP1000. Accordingly, and consistent with the 2010 MOC, the NRC and NNSA intend to cooperate as follows:

1. Current and new cooperation on the AP1000 is intended to continue to occur under the auspices of the NRC-NNSA Steering Committee, which is expected to meet annually to discuss specific cooperative programs for this project.

2. Cooperation on the AP1000 reactor design reviews including changes to the design, as identified within the Steering Committee, is intended to continue to include an exchange of staff in the areas of construction and vendor inspection. All costs associated with the exchange of inspectors are expected to be borne by the agency that incurs them respectively.
3. To further strengthen the agencies' commitment to share best practices on AP1000 reactor construction experience, cooperation on the AP1000 reactor design, as identified within the Steering Committee, is expected to be expanded to include the following specific exchanges of information:
 - a. Sharing of construction inspection experience information
 - b. Development of procedures for documenting construction inspection and testing findings
 - c. Development of guidance for regulatory oversight during the transition from plant construction to plant operation
 - d. Discussion on criteria for construction event reporting
 - e. Development of construction inspection tracking systems and procedures
 - f. Training and qualification of construction inspectors
4. To promote cooperation as the AP1000 reactors in China and the United States become operational, cooperation on the AP1000 reactor design reviews, as identified within the Steering Committee, is expected to be further expanded to include the following specific exchanges of information:
 - a. Sharing of operational regulatory experience information, such as:
 - i. Experience with plant systems, structures, and components defects and noncompliance
 - ii. Experience with emergency events
 - iii. Experience with radiological releases
 - iv. Experience with core cooling actuations
 - v. Experience with events that could have prevented the ability to safely shutdown the reactor(s)
 - vi. Experience with design and initial test program change reviews resulting from lessons learned during the commissioning and operation of the AP1000s
 - b. Exchange of staff in the area of operation oversight
 - c. Development of guidance and procedures for regulatory oversight during operation
 - d. Development of inspection tracking systems and procedures
 - e. Training and qualification of inspectors
 - f. Qualification management of operators
 - g. Regulations on operating license document system, including technical specifications and safety analysis reports

- h. Discussion on implementation of risk-informed regulatory framework
- 5. The activities to be conducted by the NRC and the NNSA under this Memorandum of Cooperation are intended to be limited to those governed by the Protocol.
- 6. Cooperation between the NRC and the NNSA under this Memorandum of Cooperation is intended to supplement and strengthen the existing cooperation between the NRC and the NNSA under the 2010 MOC, which the NRC and the NNSA intend to continue.

Signed at Vienna, Austria on this 31st day of March 2017.

FOR THE NUCLEAR REGULATORY
COMMISSION:



Kristine SVINICKI, Chairman

FOR THE NATIONAL NUCLEAR
SAFETY ADMINISTRATION:



LIU Hua, Vice Minister and Administrator