



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 31, 2018

Mr. Yun-Ho Kim, Project Manager  
APR1400 Design Certification  
Advanced Reactors Development Laboratory  
Korea Hydro and Nuclear Power Co., Ltd.  
70-1312-gil, Yuseong-daero  
Yuseong-Gu, Daejeon  
34101 Korea (Republic of)

SUBJECT: ADVANCED POWER REACTOR 1400 FINAL SAFETY EVALUATION  
FOR TOPICAL REPORT APR1400-F-A-TR-12004, REVISION 1,  
“REALISTIC EVALUATION METHODOLOGY FOR LARGE-BREAK  
LOSS OF COOLANT ACCIDENT OF THE APR1400”

Dear Mr. Kim:

The U.S. Nuclear Regulatory Commission (NRC) staff has prepared a final topical report (TR) safety evaluation (TRSE) for Topical Report APR1400-F-A-TR-12004, Revision 1, “Realistic Evaluation Methodology for Large-Break Loss of Coolant Accident of the APR1400.” This TRSE is also valid for the non-proprietary version of the TR. This action is supported by the letter dated June 15, 2018 (Agencywide Documents Access and Management System Accession No. ML18166A269), whereby the Advisory Committee on Reactor Safeguards agrees with the NRC staff’s conclusions, within the limits and conditions that are specified in the TRSE. This evaluation is in support of the review of the APR1400 design certification application submitted by Korea Hydro and Nuclear Power Co., Ltd. (KHNP) and Korea Electric Power Corporation on December 23, 2014.

The staff requests that KHNP publish the accepted enclosed proprietary and non-proprietary versions of this TR within one month of receipt of this letter. The accepted versions shall incorporate this letter and the enclosed final TRSE after the title page. Also, they must contain historical review information, including NRC requests for additional information and your responses. The accepted versions of the TR shall include an “-A” (designated accepted) following the report identification number.

If the NRC’s criteria or regulations change such that its conclusion that the accepted TR is invalidated, KHNP and/or the applicant referencing the TR will be expected either to revise and resubmit its respective documentation or to submit justification for continued applicability of the TR without revision of the respective documentation.

Document transmitted herewith contains sensitive unclassified information. When separated from the enclosure, this document is “DECONTROLLED.”

Mr. Kim

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If you have any questions or comments concerning this matter, please contact me at (301) 415-7038, or via e-mail at [William.Ward@nrc.gov](mailto:William.Ward@nrc.gov).

Sincerely,

*/RA/*

William Ward, Senior Project Manager  
Licensing Branch 2  
Division of Licensing, Siting,  
and Environmental Analysis  
Office of New Reactors

Docket No. 52-046

Enclosure:  
As stated

cc: w/o encl. see next page

Mr. Kim

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**Letter: ML18180A327**

**\*via e-mail**

**NRO-002**

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**7/4/2018**

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