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February 26, 2018
Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Attention: Mr. William Ward
Division of New Reactor Licensing

Docket No. 52-046
MKD/NW-18-0031L

Subject: Submittal of Revised SAMDAs and GSI-191 Technical Reports

References:

- 1. KHNP Letter MKD/NW-14-0037L, Submittal of APR1400 Technical Reports, dated December 23, 2014**
- 2. KHNP Letter MKD/NW-16-1147L, Response to RAI 520-8693, dated December 7, 2016**
- 3. KHNP Letter MKD/NW-17-0173L, Additional Submittal of Revised Technical Report for APR1400, dated July 12, 2017**
- 4. KHNP Letter MKD/NW-17-0330L, Submittal of Revised Technical Report for APR1400 "Design Features to Address GSI-191" (Rev.2), dated October 23, 2017**

The purpose of this letter is to transmit two sets of revised technical reports for APR1400 Design Certification.

One set is related to SAMDAs (Severe Accident Mitigation Design Alternatives) for the APR1400. The original reports had been submitted under the Reference 1. This revision deals with the SAMDAs evaluation results based on 2017 PRA update including Level 3 severe accident consequence analysis using the code of WinMACCS Version 3.10.0.

The other set is associated with the APR1400 design features to address GSI-191. This revision finally updates the part of chemical effect analysis which was re-performed because of the GOTHIC containment model change (Reference 2, 3 and 4).

Enclosure 1 contains a copy of the associated affidavit. Enclosures 2 to 5 provide electronic copies of either proprietary or non-proprietary version of each set of the revised technical reports.

If additional information or clarification required, please contact Daegeun Ahn, Director of KHNP Washington DC Center, at ahn.daegeun@khnp.co.kr or 703-388-0592.

Sincerely,

Han-gon Kim



Project Manager
Advanced Reactors Development Laboratory
Korea Hydro and Nuclear Power Co., Ltd

Enclosures:

1. Affidavit KAW-18-0031
2. Severe Accident Mitigation Design Alternatives (SAMDAs) for the APR1400 (Proprietary) (APR1400-E-P-NR-14006-P, Rev.1)
3. Severe Accident Mitigation Design Alternatives (SAMDAs) for the APR1400 (Non-Proprietary) (APR1400- E-P-NR-14006-NP, Rev.1)
4. Design Features to Address GSI-191 (Proprietary) (APR1400-E-N-NR-14001-P, Rev.3)
5. Design Features to Address GSI-191 (Non-Proprietary) (APR1400-E-N-NR-14001-NP, Rev.3)

Enclosure 1

Affidavit KAW-18-0031

I, Yun-ho Kim, state the following:

1. I am the General Manager of Korea Hydro & Nuclear Power Co., Ltd. (KHNP), and as such I am authorized to request withholding the information transmitted with this letter from public disclosure and to execute this affidavit.
2. I am familiar with the criteria applied by KHNP to determine whether certain information is proprietary, and with the policies established by KHNP to ensure the proper application of these criteria.
3. The information, APR1400-E-P-NR-14006-P and APR1400-E-N-NR-14001-P, transmitted with this letter has been classified by KHNP as proprietary in accordance with the policies for the control and protection of proprietary and confidential information. The information regarded as proprietary is identified and marked consistent with the requirements of 10 CFR 2.390, § (b)(1)(i). Accordingly, the proprietary information is enclosed within brackets and the right-hand bracket carries a notation of "TS" to indicate that the trade secret nature of the information claimed to be proprietary is the basis for proposing that the information so identified be withheld from public disclosure.
4. Pursuant to the considerations set forth in 10 CFR Section 2.390(a), KHNP considers the information classified as proprietary to be "trade secret" information since it is design, analysis, or test information that would be difficult for a competitor to reproduce and hence provides an economic and competitive advantage to KHNP.
5. The need for designating the information as proprietary has been raised within KHNP. The information is being treated proprietary and confidential and has not been disclosed by KHNP to the public.
6. Nondisclosure of the proprietary information transmitted with this letter is vital to the competitiveness held by KHNP and, hence, disclosure of the proprietary information transmitted in with this letter would have negative commercial impacts on the competitive position of KHNP in the U.S. nuclear market.
7. In accordance with KHNP policy, proprietary information contained in this document may be, or may have been, made available on a limited basis to regulatory bodies, customers, potential customers, and their agents, suppliers, and licensees, and others under suitable agreements providing for nondisclosure and limited use of the information.



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I declare that the foregoing statements are true and correct to the best of my knowledge, information and belief.

Executed on February 26, 2018

Yun-ho Kim
General Manager
APR1400 Licensing Team
Central Research Institute
Korea Hydro and Nuclear Power Co., Ltd

Enclosure 2

APR1400-E-P-NR-14006-P, Rev.1

Severe Accident Mitigation Design Alternatives (SAMDAs)
for the APR1400

(Proprietary)

Enclosure 3

APR1400-E-P-NR-14006-NP, Rev.1

Severe Accident Mitigation Design Alternatives (SAMDAs)
for the APR1400

(Non-proprietary)

Enclosure 4

APR1400-E-N-NR-14001-P, Rev.3

Design Features to Address GSI-191

(Proprietary)

Enclosure 5

APR1400-E-N-NR-14001-NP, Rev.3

Design Features to Address GSI-191

(Non-proprietary)