



**KHNP**

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July 31, 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-18-0115L

**Subject: Submittal of Revised Technical Reports for APR1400 Design Certification**

**References:**

- 1. KHNP Letter MKD/NW-17-0173L, Additional Submittal of Revised Technical Reports for APR1400, dated July 12, 2017**
- 2. KHNP Letter MKD/NW-18-0039L, Submittal of Technical Reports for the APR1400 Design Certification, dated March 19, 2018**
- 3. KHNP Letter MKD/NW-18-0091L, Submittal of Technical Reports for APR1400 Design Certification, dated June 18, 2018**
- 4. KHNP Letter MKD/NW-17-0147L, Revised Response to RAI 296-8342 for the Question 06.02.01.A-2, dated June 19, 2017**
- 5. KHNP Letter MKD/NW-15-0405L, Response to RAI 324-8362 for Question on a 30-Day Response Cycle, dated December 30, 2015**
- 6. KHNP Letter MKD/NW-16-0595L, Response to RAI 394-8460 for Questions 06.02.01.03-5, 06.02.01.03-10 and 06.02.01.03-11, dated June 8, 2016**
- 7. KHNP Letter MKD/NW-18-0066L, Revised Response to RAI 45-7883 for the Question 07.09-2 (Rev.6), dated May 4, 2018**
- 8. KHNP Letter MKD/NW-18-0112L, Revised Response to RAI 374-8481 for Questions 18-101, dated July 23, 2018**

The purpose of this letter is to transmit four (4) sets of revisions regarding the following titled technical reports:

1. Mass and Energy Release Methodologies for LOCA and MSLB (Rev.2)
2. Safety I&C System (Rev.3)
3. Control System CCF Analysis (Rev.3)
4. Human Factors Engineering Program Plan (Rev. 4)

Prior versions of the reports had been submitted under References 1 to 3. 'Mass and Energy Release Methodologies for LOCA and MSLB' Revision 2 incorporates all the responses to the relevant RAIs (See References 4 to 6). 'Software Program Manual' Revision 3 and 'Control System CCF Analysis' Revision 3 reflect all the related mark-ups including the change to External Data Communication System as provided under Reference 7. 'Human Factors Engineering Program Plan' Revision 4 clarifies the application scope of HFE program related to design changes as indicated in the latest RAI response under Reference 8.



Enclosure 1 provides a copy of the associated affidavit. Enclosures 2 to 9 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](mailto:ahn.daegeun@khnp.co.kr) or 703-388-0592.

Sincerely,

A handwritten signature in black ink that reads "yunho kim". The signature is written in a cursive style and is positioned above a horizontal line.

Yun-ho Kim  
Project Manager  
Advanced Reactors Development Laboratory  
Korea Hydro & Nuclear Power Co., Ltd.

Enclosures:

1. Affidavit KAW-18-0115
2. Mass and Energy Release Methodologies for LOCA and MSLB (Proprietary) (APR1400-Z-A-NR-14007-P, Rev.2)
3. Mass and Energy Release Methodologies for LOCA and MSLB (Non-Proprietary) (APR1400-Z-A-NR-14007-NP, Rev.2)
4. Safety I&C System (Proprietary) (APR1400-Z-J-NR-14001-P, Rev.3)
5. Safety I&C System (Non-Proprietary) (APR1400-Z-J-NR-14001-NP, Rev.3)
6. Control System CCF Analysis (Proprietary) (APR1400-Z-J-NR-14012-P, Rev.3)
7. Control System CCF Analysis (Non-Proprietary) (APR1400-Z-J-NR-14012-NP, Rev.3)
8. Human Factors Engineering Program Plan (Proprietary) (APR1400-E-I-NR-14001-P, Rev.4)
9. Human Factors Engineering Program Plan (Non-Proprietary) (APR1400-E-I-NR-14001-NP, Rev.4)

## **Enclosure 1**

### **Affidavit KAW-18-0115**

I, Jeong-kwan Suh, 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- Z-A-NR-14007-P, APR1400-Z-J-NR-14001-P, APR1400-Z-J-NR-14012-P, and APR1400-E-I-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.

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

Executed on July 31, 2018

*Jeongkwan Suh*

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Jeong-kwan Suh  
General Manager  
APR1400 Licensing Team  
Korea Hydro and Nuclear Power Co., Ltd

## **Enclosure 2**

APR1400-Z-A-NR-14007-P, Rev.2

Mass and Energy Release Methodologies for LOCA and MSLB

(Proprietary)

## **Enclosure 3**

APR1400-Z-A-NR-14007-NP, Rev.2

Mass and Energy Release Methodologies for LOCA and MSLB

(Non-proprietary)

**Enclosure 4**

APR1400-Z-J-NR-14001-P, Rev.3

Safety I&C System

(Proprietary)

**Enclosure 5**

APR1400-Z-J-NR-14001-NP, Rev.3

Safety I&C System

(Non-proprietary)



**Enclosure 6**

APR1400-Z-J-NR-14012-P, Rev.3

Control System CCF Analysis

(Proprietary)

**Enclosure 7**

APR1400-Z-J-NR-14012-NP, Rev.3

Control System CCF Analysis

(Non-proprietary)

**Enclosure 8**

APR1400-E-I-NR-14001-P, Rev.4

Human Factors Engineering Program Plan

(Proprietary)

**Enclosure 9**

APR1400-E-I-NR-14001-NP, Rev.4

Human Factors Engineering Program Plan

(Non-proprietary)