



KHNP

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June 18, 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-18-0091L

Subject: Submittal of Technical Reports for APR1400 Design Certification

- References:**
1. KHNP Letter MKD/NW-18-0035L, APR1400 Standard Design Certification Application Control Document, Revision 2, Tier 1 and Tier 2, dated March 8, 2018
 2. KHNP Letter MKD/NW-18-0036L, Submittal of Revised Technical Reports on Seismic and NI Basemat Design, dated March 9, 2018
 3. KHNP Letter MKD/NW-18-0037L, Submittal of Revised Technical Reports on HFE and SAA, dated March 14, 2018
 4. KHNP Letter MKD/NW-18-0033L, Submittal of Revised EQ Program and Onsite AC Power System Analysis Technical Reports, dated March 8, 2018

The purpose of this letter is to transmit eleven (11) sets of technical reports for APR1400 Design Certification.

Enclosure 1 contains a copy of the associated affidavit. Enclosures 2 to 23 provide electronic copies of either proprietary or non-proprietary version of each set of the reports.

If additional information or clarification required, please contact Daegun Ahn, Director of KHNP Washington DC Center, at ahn.daegun@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-18-0091
2. Stability Check for NI Common Basemat (Proprietary) (APR1400-E-S-NR-14006-P, Rev.5)

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3. Stability Check for NI Common Basemat (Non-Proprietary) (APR1400-E-S-NR-14006-NP, Rev.5)
4. Human Factors Engineering Program Plan (Proprietary) (APR1400-E-I-NR-14001-P, Rev.3)
5. Human Factors Engineering Program Plan (Non-Proprietary) (APR1400-E-I-NR-14001-NP, Rev.3)
6. Task Analysis Implementation Plan (Proprietary) (APR1400-E-I-NR-14004-P, Rev.3)
7. Task Analysis Implementation Plan (Non-Proprietary) (APR1400-E-I-NR-14004-NP, Rev.3)
8. Treatment of Important Human Actions Implementation Plan (Proprietary) (APR1400-E-I-NR-14006-P, Rev.3)
9. Treatment of Important Human Actions Implementation Plan (Non-Proprietary) (APR1400-E-I-NR-14006-NP, Rev.3)
10. Human-System Interface Design Implementation Plan (Proprietary) (APR1400-E-I-NR-14007-P, Rev.3)
11. Human-System Interface Design Implementation Plan (Non-Proprietary) (APR1400-E-I-NR-14007-NP, Rev.3)
12. Human Factors Verification and Validation Implementation Plan (Proprietary) (APR1400-E-I-NR-14008-P, Rev.3)
13. Human Factors Verification and Validation Implementation Plan (Non-Proprietary) (APR1400-E-I-NR-14008-NP, Rev.3)
14. Basic Human-System Interface (Proprietary) (APR1400-E-I-NR-14011-P, Rev.3)
15. Basic Human-System Interface (Non-Proprietary) (APR1400-E-I-NR-14011-NP, Rev.3)
16. Evaluation of Main Steam and Feedwater Piping Applied to the Graded Approach for the APR1400 (Proprietary) (APR1400-E-B-NR-16001-P, Rev.0)
17. Evaluation of Main Steam and Feedwater Piping Applied to the Graded Approach for the APR1400 (Non-Proprietary) (APR1400-E-B-NR-16001-NP, Rev.0)
18. Evaluation of Safety Injection and Shutdown Cooling Applied to the Graded Approach for the APR1400 (Proprietary) (APR1400-E-B-NR-16002-P, Rev.1)
19. Evaluation of Main Steam and Feedwater Piping Applied to the Graded Approach for the APR1400 (Non-Proprietary) (APR1400-E-B-NR-16002-NP, Rev.1)
20. Summary Stress Report for Primary Piping (Proprietary) (APR1400-H-N-NR-14005-P, Rev.2)
21. Summary Stress Report for Primary Piping (Non-Proprietary) (APR1400-H-N-NR-14005-NP, Rev.2)
22. Equipment Qualification Program (Proprietary) (APR1400-E-X-NR-14001-P, Rev.3)
23. Equipment Qualification Program (Non-Proprietary) (APR1400-E-X-NR-14001-NP, Rev.3)

Enclosure 1

Affidavit KAW-18-0091

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-S-NR-14006-P, APR1400-E-I-NR-14001-P, APR1400-E-I-NR-14004-P, APR1400-E-I-NR-14006-P, APR1400-E-I-NR-14007-P, APR1400-E-I-NR-14008-P, APR1400-E-I-NR-14011-P, APR1400-E-B-NR-16001-P, APR1400-E-B-NR-16002-P, APR 1400-H-N-NR-14005-P, and APR1400-E-X-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 June 18, 2018

A handwritten signature in black ink, appearing to be the initials "YH" or a similar stylized representation of the name Yun-ho Kim.

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



Enclosure 2

APR1400-E-S-NR-14006-P, Rev.5

Stability Check for NI Common Basemat

(Proprietary)



Enclosure 3

APR1400-E-S-NR-14006-NP, Rev.5

Stability Check for NI Common Basemat

(Non-proprietary)



Enclosure 4

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

Human Factors Engineering Program Plan

(Proprietary)



Enclosure 5

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

Human Factors Engineering Program Plan

(Non-proprietary)



Enclosure 6

APR1400-E-I-NR-14004-P, Rev.3

Task Analysis Implementation Plan

(Proprietary)



Enclosure 7

APR1400-E-I-NR-14004-NP, Rev.3

Task Analysis Implementation Plan

(Non-proprietary)



Enclosure 8

APR1400-E-I-NR-14006-P, Rev.3

Treatment of Important Human Actions Implementation Plan

(Proprietary)



Enclosure 9

APR1400-E-I-NR-14006-NP, Rev.3

Treatment of Important Human Actions Implementation Plan

(Non-proprietary)



Enclosure 10

APR1400-E-I-NR-14007-P, Rev.3

Human-System Interface Design Implementation Plan

(Proprietary)



Enclosure 11

APR1400-E-I-NR-14007-NP, Rev.3

Human-System Interface Design Implementation Plan

(Non-proprietary)



Enclosure 12

APR1400-E-I-NR-14008-P, Rev.3

Human Factors Verification and Validation Implementation Plan

(Proprietary)



Enclosure 13

APR1400-E-I-NR-14008-NP, Rev.3

Human Factors Verification and Validation Implementation Plan

(Non-proprietary)



Enclosure 14

APR1400-E-I-NR-14011-P, Rev.3

Basic Human-System Interface

(Proprietary)



Enclosure 15

APR1400-E-I-NR-14011-NP, Rev.3

Basic Human-System Interface

(Non-proprietary)



Enclosure 16

APR1400-E-B-NR-16001-P, Rev.0

Evaluation of Main Steam and Feedwater Piping Applied to the Graded
Approach for the APR1400

(Proprietary)



Enclosure 17

APR1400-E-B-NR-16001-NP, Rev.0

Evaluation of Main Steam and Feedwater Piping Applied to the Graded
Approach for the APR1400

(Non-proprietary)



Enclosure 18

APR1400-E-B-NR-16002-P, Rev.0

Evaluation of Safety Injection and Shutdown Cooling Applied to the
Graded Approach for the APR1400

(Proprietary)



Enclosure 19

APR1400-E-B-NR-16002-NP, Rev.0

Evaluation of Safety Injection and Shutdown Cooling Applied to the
Graded Approach for the APR1400

(Non-proprietary)



Enclosure 20

APR1400-H-N-NR-14004-P, Rev.2

Summary Stress Report for Primary Piping

(Proprietary)



Enclosure 21

APR1400-H-N-NR-14004-NP, Rev.2

Summary Stress Report for Primary Piping

(Non-proprietary)



Enclosure 22

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

Equipment Qualification Program

(Proprietary)



Enclosure 23

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

Equipment Qualification Program

(Non-proprietary)