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March 21, 2016  
 Document Control Desk  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555-0001

Attention: Mr. Jeff Ciocco  
 Division of New Reactor Licensing

Docket No. 52-046  
 MKD/NW-16-0241L

**Subject: Schedule for revision of technical report “Structural Analysis of Fuel Assemblies for Seismic and Loss of Coolant Accident Loading”**

KEPCO/KHNP submitted technical report APR1400-Z-M-NR-14010-P Rev. 0 (Structural Analysis of Fuel Assemblies for Seismic and Loss of Coolant Accident Loading) to the NRC in 2014. During the audit of this technical report conducted from Oct. 14 to Oct. 16 in 2015, the staff noted that there are differences between the referenced methodology of CENPD-178-P-A Rev. 1 and the methodology actually used to calculate the seismic response for the PLUS7 fuel design. Therefore KEPCO/KHNP is revising the following sections of technical report APR1400-Z-M-NR-14010-P Rev. 0 and will submit a revised technical report by the end of February 2017. Other sections will not be affected by the changes due to the new grid and fuel assembly testing. This revised technical report will also include the results of the *Spacer Grid and Fuel Assembly Tests* scheduled to be completed by December 2016.

Sections to be revised in the technical report:

- Sections 3.1, 3.2, 3.3, 3.4, 5.2, 5.3, 6.2.6, Appendix A
- Tables 3-1~3-6, 4-1, 4-2,
- Figures 3-6, 3-7, 3-11, 3-12, 3-16, 3-17, 3-18, 4-3, 4-5, 4-6, 4-8, 4-9, 4-11, 4-12

\* Addendum with EOL seismic analysis results will be added.

KEPCO/KHNP will conduct spacer grid and fuel assembly tests as well as calculate the seismic response for PLUS7 fuel design based on the methodology of CENPD-178-P-A Rev. 1 and in accordance with the schedule provided below. The witness points in the schedule below indicate time frames when NRC staff may witness the testing being performed.

○ Milestone Schedule of Spacer Grid and Fuel Assembly Tests

Items	Dates	Witness Points
[At BOL Conditions]		
Grid Tests	April 2016	*
FA Model Development	July 2016	
Seismic Analysis	Oct. 2016	

Update DCD, Update Topical Report, Revise Technical Report	Feb. 2017	
[At EOL Conditions]		
Grid Tests	May 2016	*
FA Mechanical Tests	Oct. 2016	*
FA Damping Tests	Dec. 2016	*
FA Model Development	Feb. 2017	
Seismic Analysis	July 2017	

In addition, after completion of the seismic response analyses using the results of spacer grid and fuel assembly tests, KEPCO/KHNP will address the “End of Life Fuel Seismic” issues identified in RAI 275-8294 and draft RAI SRAB 8405 in the revised report that will be submitted to the NRC in Feb. 2017. The table below lists the schedule for test deliverables.

○ Deliverables of Spacer Grid and Fuel Assembly Tests

ITEMS	DATES
BOL Test Results and FA Model (*)	Sept. 2016
BOL Seismic Analysis Results (*)	Dec. 2016
Submittal of Updated DCD, Updated Topical Report, and Revised Technical Report(Rev.1) with BOL Seismic Analysis Results, EOL Test Results, and EOL FA Model	Feb. 2017
Submittal of Addendum to Revised Technical Report(Rev.1) with EOL Seismic Analysis Results	July 2017

\* Available for review

If additional information or clarification is 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.



**KHNP**  
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Sincerely,

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