

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

APR1400 Design Certification

Korea Electric Power Corporation / Korea Hydro & Nuclear Power Co., LTD

Docket No. 52-046

RAI No.: No. 11-7889
SRP Section: 13.05.02.01 – Operating and Emergency Operating Procedures
Application Section: 13.5.2.1
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Question No. 13.05.02.01-1

APR1400 DCD, Chapter 13, “Conduct of Operations,” Section 13.5, “Plant Procedures”

REQUIREMENTS

APR1400 Design Control Document (DCD) Tier 2, Section 13.5, “Plant Procedures,” states the Combined License Applicant (COL) is to provide a program for developing and implementing emergency operating procedures (EOPs). The COL applicant will also develop target dates for completion and submittal to the NRC of program elements.

Standard Review Plan (SRP) Section 13.5.2.1, “Operating and Emergency Operating Procedures,” section I.3 states that the SAR or other submittal (e.g., the procedures generation package [PGP]) should describe the applicant's program for developing EOPs as well as the required content of the EOPs. The staff will review the applicant's program for development and implementation of the EOPs. SRP Section 13.5.2.1 identifies the four elements of the Procedures Generation Package (PGP) as:

- a. Plant-specific technical guidelines (P-STGs)
- b. A plant-specific writer's guide to be used to develop the EOPs
- c. A description of the program for verification and validation of the EOPs
- d. A description of the program for training operators on EOPs

The PGP submittal should describe the COL applicant's procedure development program for the EOPs as well as the required content of the EOPs. The P-STGs (from which the EOPs are derived) are guidelines based on the analysis of transients and accidents that are specific to a COL applicant's plant design and operating philosophy. The P-STGs may be based on

either of the following generic technical guideline (GTG) options:

- a. APR1400 design-specific generic technical guidelines (GTGs), the development of which has no basis in any previously reviewed and approved owners group GTG. KHNP would provide all necessary engineering evaluations and/or analyses used in the developmental process.
- b. APR 1400 design-specific GTGs that are derived from a previously reviewed and approved owners group GTG (i.e., Westinghouse, Combustion Engineering, Babcock and Wilcox, General Electric). KHNP would identify significant safety deviations from the approved owner's group GTG (including identification of additional equipment beyond that identified in the GTGs), along with all necessary engineering evaluations and/or analyses to technically justify the adequacy of each deviation.

APR 1400 design-specific GTGs require NRC review and approval.

ISSUE

APR 1400 DCD Section 13.5 does not include APR 1400 design-specific GTGs.

INFORMATION NEEDED

Provide APR 1400 design-specific GTGs for NRC review and approval, along with all necessary engineering evaluations and/or analyses.

Response

The APR1400 Emergency Operating Guidelines (EOGs) have been developed as APR1400 design-specific GTGs and will be submitted for NRC review. The APR1400 EOGs were developed based on option "b" of GTG options described above; that is, the EOGs were based on the Combustion Engineering GTGs with significant safety deviations identified and evaluated to develop the APR1400 EOGs. A deviation summary report will also be submitted.

The APR1400 specific design features were incorporated into the analyses for the operational transients and accidents that were used for the EOGs. The technical report for analyses, KEPCO E&C/ND/TR/11-005, "Best Estimate Analyses for the Operational Transients and Accidents for APR1400 Emergency Operating Guidelines", will be made available for NRC review.

Impact on DCD

There is no impact on the DCD.

Impact on PRA

There is no impact on the PRA.

Impact on Technical/Topical/Environmental Reports

There is no impact on any Technical, Topical or Environmental Reports.

Impact on Technical Specifications

There is no impact on the Technical Specifications.