

April 15, 2014

Mr. Jerald G. Head  
Senior Vice President, Regulatory Affairs  
GE Hitachi Nuclear Energy  
3901 Castle Hayne Road MC A-18  
Wilmington, NC 28401

SUBJECT: UPDATED ECONOMIC SIMPLIFIED BOILING-WATER REACTOR DESIGN  
CERTIFICATION RULEMAKING SCHEDULE

Dear Mr. Head:

The U.S. Nuclear Regulatory Commission (NRC) has decided to issue a supplemental proposed rule for General Electric-Hitachi Nuclear Energy's (GEH) Economic Simplified Boiling-Water Reactor (ESBWR) design. This will provide the public an opportunity to comment on: (i) proposed changes related to the analysis methodology supporting the ESBWR steam dryer design that were made after the public comment period closed on the Commission's proposal to certify the ESBWR standard plant design in a rulemaking, and (ii) the NRC's proposed clarification of its intent to treat 50 referenced documents within Revision 10 of the ESBWR design control document (DCD) as requirements and matters resolved in subsequent licensing and enforcement actions for plants referencing the ESBWR design certification. The reasons for this decision, as well as the updated rulemaking schedule, are provided below.

On March 9, 2011, the NRC staff issued a Final Safety Evaluation Report (FSER) for the ESBWR design. Concurrently, the NRC staff issued the final standard design approval (SDA), then designated as an "FDA," for the ESBWR design. Issuance of the SDA signified completion of the NRC staff's technical review of the ESBWR design. Subsequently, the Commission published a Notice of Proposed Rulemaking (Notice) in which it proposed a new rule certifying the ESBWR standard plant design and requested public comment on the proposed rule (76 FR 16,549; March 24, 2011). The public comment period specified in the Notice ended on June 7, 2011. On November 15, 2011, the NRC staff informed you that it was preparing a final rule package certifying the ESBWR design for submission to the Commission and provided a schedule to you for completing the ESBWR rulemaking.

In a letter dated January 19, 2012 (Agencywide Documents Access and Management System Accession No. ML120170304), the NRC staff informed you of errors identified in the benchmarking GEH used as a basis for determining fluctuating pressure loading on the steam dryer and errors in a number of steam dryer modeling parameters. The letter also stated that these errors may affect the conclusions in the staff's FSER and need to be addressed before we complete the ESBWR design certification (DC) rulemaking. This information resulted in the need to revisit the previously communicated rulemaking schedule.

To assess the steam dryer issues, the NRC staff has engaged GEH in audits, requests for additional information (RAIs), public meetings, and teleconferences. GEH has responded to the NRC staff's RAIs. As a result, on April 1, 2014, you submitted to the NRC Revision 10 of the ESBWR design control document (DCD), which reflects changes to the analysis methodology supporting the ESBWR steam dryer, including the replacement of licensing topical reports with

engineering reports. Within these revised documents you substantially changed the details of the steam dryer benchmarking and modeling methodology. Because of the staff's reliance on these changes in making its findings regarding the adequacy of the steam dryer design, the NRC has decided to issue a supplemental proposed rule for the ESBWR DC rulemaking. This supplement will provide the public an opportunity to comment on the changes you made to the analysis methodology supporting the ESBWR steam dryer design since the publication of the March 2011 Notice. Regarding the steam dryer, the NRC intends to limit the scope of the supplemental proposed rule to those changes associated with the analysis methodology supporting the ESBWR steam dryer design. The supplemental proposed rule will reference Revision 10 of the DCD, which is publicly available. Additionally, the supplemental proposed rule will reference the engineering reports that support the steam dryer benchmarking and modeling methodology. The engineering reports contain a significant amount of proprietary information, and the NRC has made the redacted reports publicly available to support the supplemental proposed rule.

Additionally, in the proposed ESBWR design certification rule, the NRC proposed to incorporate by reference the previous revision (Revision 9) of the ESBWR DCD. After the proposed rule was issued, the NRC noted that Section 1.6 of Revision 10 of the DCD lists 70 referenced documents which contain requirements and are incorporated by reference into the DCD. Accordingly, the NRC determined that certain of these documents contain binding requirements and should also be incorporated by reference in the ESBWR design certification rule. The supplemental proposed rule will seek public comments on the NRC's proposed clarification of its intent to treat 50 non-public referenced documents as requirements and matters resolved in subsequent licensing and enforcement actions for plants referencing the ESBWR design certification. The supplemental proposed rule will also clarify, but not seek public comment on, the NRC's intent to obtain approval for incorporation by reference from the Director of the Office of the Federal Register for the remaining 20 publicly available referenced documents, in addition to the ESBWR DCD.

Following closure of the public comment period for the supplemental proposed rule, the NRC staff will consider public comments on the supplement submitted in accordance with the notice for the supplemental proposed rule, as well as the comments previously received on the 2011 proposed rule, as it develops a final rule. The *Federal Register* notice of final rulemaking will address all of the changes you made in revision 10 of the ESBWR DCD and why the NRC decided each such change did or did not warrant issuance of a supplemental proposed rule.

The NRC staff developed an advanced supplemental FSER, which contains proprietary information, to document its safety review and conclusions regarding the changes you made in Revision 10 of the DCD. The NRC is also preparing a redacted, publicly available version of the advanced supplemental FSER. The NRC staff plans to reference the proprietary version of the advanced supplemental FSER in the supplemental proposed rule and to make the redacted version of the advanced supplemental FSER publicly available, similar to what was done for the ESBWR proposed rule in March 2011. Should the Commission certify the ESBWR standard design, a final proprietary version of the supplemental FSER will be referenced in the ESBWR final rule, and a final redacted version of the supplemental FSER will be made publicly available.

We have reassessed the schedule for completing the supplemental FSER, the supplemental proposed rule, and the final rule. The NRC currently plans to publish the supplemental proposed rule in the *Federal Register* in May 2014, issue the final supplemental FSER in June 2014, and deliver the final rule to the Commission in July 2014. If the Commission affirms the final rule, the NRC would publish the final rule in the *Federal Register* in September 2014. The revised schedule is based upon, but not limited to, the following assumptions:

- (1) The NRC assumes timely resolution of public comments on the supplemental proposed rule.
- (2) The schedule for the remaining work on the final rulemaking, and its associated assumptions, follows that of SECY-09-0018, "Streamlining Design Certification Rulemakings" to the extent possible.

If any of these assumptions becomes invalid or is otherwise not realized, a subsequent schedule change may be needed. We will inform you if that becomes necessary.

Sincerely,

*/RA/*

Michael E. Mayfield, Director  
Division of Advanced Reactors and Rulemaking  
Office of New Reactors

Docket No.: 52-010

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- (1) The NRC assumes timely resolution of public comments on the supplemental proposed rule.
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Sincerely,

**/RA/**

Michael E. Mayfield, Director  
 Division of Advanced Reactors and Rulemaking  
 Office of New Reactors

Docket No.: 52-010

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