



GE Energy

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MFN 06-085 Supplement 2

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U.S. Nuclear Regulatory Commission
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Subject: **Response to Portion of NRC Request for Additional Information
Letter No. 15 - Reactor Coolant Pressure Boundary (RCPB) - RAI
Number 5.2-4 S02**

Enclosure 1 contains GE's response to the subject NRC RAI originally transmitted via the Reference 1 letter and supplemented by a second NRC request for clarification.

If you have any questions or require additional information, please contact me.

Sincerely,

James C. Kinsey
Project Manager, ESBWR Licensing

Reference:

1. MFN 06-102, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 15 Related to ESBWR Design Certification Application*, March 30, 2006

Enclosure:

1. MFN 06-085 Supplement 2 - Response to Portion of NRC Request for Additional Information Letter No. 15 - Related to ESBWR Design Certification Application - Reactor Coolant Pressure Boundary (RCPB) - RAI Number 5.2-4 S02

cc: AE Cabbage USNRC (with enclosures)
BE Brown GE/Wilmington (with enclosures)
GB Stramback GE/San Jose (with enclosures)
eDRF 0000-0067-7035

Enclosure 1

MFN 06-085 Supplement 2

Response to Portion of NRC Request for

Additional Information Letter No. 15

Related to ESBWR Design Certification Application

Reactor Coolant Pressure Boundary (RCPB)

RAI Number 5.2-4 S02

NRC RAI 5.2-4:

In DCD Section 5.2.5.8, it states that procedures are provided to the operator to convert the identified and unidentified leakage into a common leakage rate equivalent. Are the procedures to be generic for the ESBWR design and currently available for audit? Or are the plant-specific procedures to be developed by COL applicants, which should be a COL action item?

GE Response:

The procedures to convert different sources of leakage into a common rate equivalent will be provided by COL. This item will be added to the COL area of 5.2.6.

NRC RAI 5.2-4 S01:

GE did not revise Section 5.2.6 to reflect the markup page in its response to the RAI concerning a COL Action Item while the other markup changes in the same response were made in Rev. 2 of DCD.

GE Response:

DCD Tier 2, Revision 3, Subsections 5.2.5.8 and 5.2.6 include the changes that make the procedures a COL Action Item.

NRC RAI 5.2-4 S02:

In RAI 5.2-4 as related to RG 1.45 Regulatory Position C.7, the staff asked the applicant to clarify whether the procedures that will provide operator guidance on converting leakage instrument indications into a common leakage rate equivalent were generic for the ESBWR design or to be developed by COL applicants. In GE's response, MFN 06-085, GE stated that the procedures to convert different sources of leakage into a common rate equivalent would be provided by COL applicants. This is a COL action item to be added to DCD Section 5.2.6. Accordingly, GE provided a markup page for Section 5.2.6 in the RAI response. However, when reviewing DCD Revision 2, the staff could not find the promised COL action item. In a conference call, dated January 16, 2007, GE agreed to incorporate the change in Revision 3 of the DCD. The staff reviewed Revision 3 and found that DCD Section 5.2.6 stated "Operators will be provided with a procedure to determine the identified and unidentified leakage in order to establish whether the leakage rates are within the allowable TS." The staff found the statement not acceptable on two aspects.

- A. Revise the COL Holder item to state that "The COL Holder is responsible for the development of a procedure ..." rather than the current statement that the "Operators will be provided with procedures ..."*
- B. Revise the COL Holder item to better characterize the purpose of the procedures. The purpose is to convert different sources of leakage (such as sump pump activity, sump level, condensate flow rate, and radioactivity) into a common rate equivalent (gpm). This leak rate information can be used by operators to monitor the leakage and to manage the leakage well*

below the TS limit. The purpose of the procedures is not limited to what the statement indicated to establish whether the leakage rates are within the allowable TS.

GE Response:

DCD Tier 2, Revision 3, Subsection 5.2.6, will be revised to incorporate the NRC recommendations.

DCD Impact:

DCD Tier 2, Subsection 5.2.6, will be revised in DCD Tier 2, Revision 4, as shown in the attached markup.

5.2.6 COL Unit-Specific Information

Preservice and Inservice Inspection Program Plan

The COL holder is responsible for the development of the preservice and inservice inspection program plans that are based on the ASME Code, Section XI (Subsection 5.2.4).

COL Holder Procedures

~~Operators will be provided with~~ The COL holder is responsible for the development of a procedure to ~~determine the~~ convert different parameter indications for identified and unidentified leakage ~~in order to~~ (e.g., sump pump run time, sump level, condensate transfer rate, process chemistry/radioactivity) into common leak rate equivalents (volumetric or mass flow) and leak rate rate-of-change values. The monitored leakage equivalents provide information used by the plant operators to manage the leakage and establish whether the leakage rates are within the allowable Technical Specifications and determine the trend.

~~Operators will be provided with~~ The COL holder is responsible for the development of procedures to assist the plant operators in monitoring, recording, trending, determining the source(s) of leakage, and evaluating potential corrective action plans.