



GE Energy

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Project 717

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**Subject: GE Response to Results of NRC Acceptance Review for ESBWR
Design Certification Application – Item 6 (TAC # MC8168)**

In the Reference 1 letter, the NRC indicated that additional information was required in certain areas of the ESBWR design certification application before the NRC could begin its review in those areas. Enclosure 1 contains additional information in the area of digital instrumentation and control (item 6 in the Reference 1 letter).

Enclosure 1 contains a revised DCD section 7.1, "Introduction," that includes the discussion of the ESBWR safety I&C systems (RPS and SSLC) architecture and platform description. Supporting (non-ESBWR) GE topical reports are referenced at the end of Section 7.1 for further detailed information on the safety I&C architecture and platform description. Also included is a full summary description of the ESBWR safety I&C system compliance to IEEE Std. 603, with a roadmap table to point to specific system descriptions in the various Chapter 7 sections that address the IEEE Std. 603 safety criteria requirements. Enclosure 1 also contains summary descriptions of other issues raised in the Reference 1 letter, including BTP HICB-16 issues. This revised section will be included in Revision 1 of the DCD.

Enclosure 1 is provided in full compliance with GE's Quality Assurance (QA) Program (NEDO-11209-04A, GE Nuclear Energy Quality Assurance Program Description, March 31, 1989), which is NRC approved.

Consistent with this QA program, Enclosure 1 is identified as "Conditional Release – pending closure of design verifications." While GE has completed review of the technical accuracy and completeness of all the enclosure's content, and believes that the

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document is accurate, complete and ready for NRC review, some internal GE documentation remains to be closed. Accordingly, the conditional release status is identified on the document until closure of the internal documentation, which is scheduled for the fourth quarter of 2005.

GE plans to submit the following licensing topical reports (LTR) in the areas of safety I&C hardware and software architecture and platforms; and software development life cycle design process plans identified in BTP HICB-14. These LTRs (both proprietary and non proprietary versions) will be submitted by October 28, 2005

- NEDE-33232P, *SSLC/RTIF System Performance Specification*, October, 2005
- NEDE-33233P, *Safety System Logic and Control/Reactor Trip and Isolation Functions (SSLC/RTIF) Hardware/Software Specification*, October, 2005
- NEDE-33234P, *RTIF Digital Trip Module (DTM) Function Software Design Specification*, October, 2005
- NEDE-33226P, *ESBWR I&C Software Management Plan (Draft)*, October, 2005
- NEDE-33227P, *ESBWR I&C Software Configuration Management Plan (Draft)*, October, 2005
- NEDE-33229P, *ESBWR I&C Software Development Plan (Draft)*, October, 2005

If you have any questions about the information provided here, please let me know.

Sincerely,



David H. Hinds
Manager, ESBWR

Reference:

1. MFN 05-103, Letter from U. S. Nuclear Regulatory Commission, to Steven A. Hucik, *Results of Acceptance Review for ESBWR Design Certification Application (TAC NO. MC8168)*, September 23, 2005

Enclosure:

1. MFN 05-118 – Revised DCD section 7.1, “Introduction” (Instrumentation and Control Systems)

cc: WD Beckner USNRC (w/o enclosures)
AE Cabbage USNRC (with enclosures)
LA Dudes USNRC (w/o enclosures)
GB Stramback GE/San Jose (with enclosures)
eDRF 0000-0040-5151

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Enclosure 1

ENCLOSURE 1

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Revised DCD section 7.1, “Introduction” (Instrumentation and Control Systems)

Conditional Release – pending closure of design verifications