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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. 76 Related to ESBWR Design Certification Application –
RAI Number 7.2-28**

Enclosure 1 contains GHNEA's response to the subject NRC RAI transmitted via the referenced letter.

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

Sincerely,



James C. Kinsey
Project Manager, ESBWR Licensing

DOGB

NPRD

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Reference:

1. MFN 06-388, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 76 Related to ESBWR Design Certification Application*, October 11, 2006

Enclosures:

1. MFN 07-364, Response to Portion of NRC Request for Additional Information Letter No. 76 Related to ESBWR Design Certification Application - RAI Number 7.2-28

cc: AE Cabbage USNRC (with enclosures)
RE Brown GHNEA/Wilmington (with enclosures)
GB Stramback GHNEA/San Jose (with enclosures)
eDRF 0000-0060-7038

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Enclosure 1

**Response to NRC Request for Additional Information
Related to ESBWR Design Certification Application
DCD Section 7.2**

RAI Number 7.2-28

NRC RAI 7.2-28

Identify the I&C systems for which the design acceptance criteria (DAC) process will be followed.

10 CFR 52.47 requires that the application must contain a level of design information sufficient to enable the Commission to judge the applicant's proposed means of assuring that the construction conforms to the design. As defined in SECY-92-053, dated February 19, 1992, the advanced I&C system is one of the review areas that can use the design acceptance criteria (DAC) as part of the design review and certification process. The DAC are "a set of prescribed limits, parameters, procedures, and attributes upon which the NRC relies, in a limited number of technical areas, in making a final safety determination to support a design certification." The DAC are objective, and must be verified as part of the inspections, tests, analyses, and acceptance criteria (ITAAC) performed to demonstrate that the as-built facility conformed to the certified design. Identify the I&C systems for which the design acceptance criteria (DAC) process will be followed.

GE Response

Design certification of the safety-related distributed control and information system (Q-DCIS) design, which includes the reactor protection system (RPS), the neutron monitoring system (NMS), the safety system logic and control (SSLC)/engineered safety features (ESF) subsystems, will use the design acceptance criteria (DAC) process. The DAC process will also be used for design certification of the nonsafety-related DCIS (N-DCIS) using a graded approach based on risk significance level. These systems include software, for which the DAC process will also be used. These systems are described in DCD Tier 2, Revision 3, Sections 7.1, 7.2, 7.3, 7.4, 7.5, and 7.7.

DAC will continue to be used in the software development for safety-related systems and in the Human Factors Engineering areas.

DCD Impact

No change will be made to the DCD as a result of this RAI.