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Subject: **Response to Portion of NRC Request for Additional Information Letter No. 63 Related to ESBWR Design Certification Application – Technical Specifications – RAI Number 16.2-41**

Enclosure 1 contains GE's response to the subject NRC RAI transmitted via the Reference 1 letter.

If you have any questions or require additional information regarding the information provided here, please contact me.

Sincerely,

Kathy Sedney for

James C. Kinsey
Project Manager, ESBWR Licensing

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Reference:

1. MFN 06-375, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 63 Related to ESBWR Design Certification Application,* October 4, 2006

Enclosure:

1. MFN 07-145 – Response to Portion of NRC Request for Additional Information Letter No. 63 Related to ESBWR Design Certification Application – Technical Specifications – RAI Number 16.2-41

cc:	AE Cubbage	USNRC (with enclosures)
	DH Hinds	GE (with enclosures)
	RE Brown	GE (w/o enclosures)
	eDRF	0000-0062-8192

Enclosure 1

MFN 07-145

Response to Portion of NRC Request for

Additional Information Letter No. 63

Related to ESBWR Design Certification Application

- Technical Specifications -

RAI Number 16.2-41

NRC RAI 16.2-41

Justify no ICS Pool Level and Temperature SR

10 CFR 50.36(c)(3) states that TS will include items surveillance requirements, which are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCO will be met.

Provide justification for not having Isolation Condenser System ICS SR similar to approved Dresden SR 3.5.3.1, requiring verification every 24 hours of:

a. Shellside water level > 6 feet; and

b. Shellside water temperature < 210F.

GE Response

For the ESBWR, the Isolation Condenser (IC) subcompartments of the IC/Passive Containment Cooling (IC/PCC) pools are the equivalent of the shellside of the ICs used at Dresden. Each ESBWR IC is submerged in an associated IC/PCC expansion pool subcompartment. Heat from the reactor coolant inside the IC condenser is transferred to the water in the subcompartment.

ESBWR LCO 3.5.4, "Isolation Condenser System (ICS) - Operating," does not include a surveillance requirement (SR) for periodic verification of IC subcompartment level because each IC subcompartment is connected to the associated IC/PCC expansion pool via a manual isolation valve located near the bottom of the subcompartment that is verified locked open by SR 3.5.4.3. LCO 3.7.1, "IC/PCC Pools," includes SR 3.7.1.1, which requires periodic verification that the IC/PCC expansion pool levels are within required limits. The level in each IC subcompartment is equal to the level in the associated expansion pool because the surfaces of both the subcompartments and expansion pools are open to the atmosphere. SR 3.5.4.3 and SR 3.7.1.1 ensure that the IC subcompartments are maintained at the required level.

ESBWR LCO 3.5.4 does not include an SR for periodic verification of the IC subcompartment temperature because the initial temperature in the IC subcompartments does not affect results of analyses for a loss of coolant accident, station blackout, or reactor pressure vessel isolation. The analyses indicate there is sufficient water in the IC /PCC pools to provide a heat sink for 72 hours assuming the initial bulk average water temperature in the IC/PCC pools, which include the IC/PCC expansion pools, the IC and PCC subcompartments, the dryer/separator pool, and the reactor well, is maintained within the limit in SR 3.7.1.3. SR 3.7.1.3 provides the periodic verification that the IC/PCC pools bulk average temperature is within the required limit.

GE will revise the LCO section of the Bases for LCO 3.5.4 in Revision 4 to remove the brackets from the statement that there are no requirements for maximum or minimum temperature in individual ICS condenser subcompartments. GE revised the LCO Bases for SR 3.7.1.3 in Revision 3 to clarify that the average water temperature in the IC/PCC pools is calculated based on the volume and temperature of the water in the expansion pools, the IC and PCC subcompartments, the dryer/separator pool, and the reactor well.

DCD Impact

DCD Tier 2, Chapter 16B, will be revised as described above.