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Subject: **Supplement to Revised Response to Portion of NRC Request for Additional Information Letter No. 355 Related to ESBWR Design Certification Application - Auxiliary Systems - RAI Number 9.4-53 S01**

Enclosure 1 contains ESBWR Design Control Document (DCD) Revision 8 markups to Tier 1, Table 2.16.2-2. These markups were previously submitted (Reference 1) but were not correctly included in DCD Revision 7 (Reference 2).

If you have any questions about the information provided, please contact me.

Sincerely,

Richard E. Kingston
Vice President, ESBWR Licensing

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NRO

Reference:

1. MFN 09-627 Rev 1, Revised Response to Portion of NRC Request for Additional Information Letter No. 355 Related to ESBWR Design Certification Application - Auxiliary Systems - RAI Number 9.4-53 S01, dated February 10, 2010
2. MFN 10-126, ESBWR Standard Plant Design Certification Application Design Control Document, Revision 7, Tier 1 and Tier 2, dated March 29, 2010

Enclosure:

1. Supplement to Revised Response to Portion of NRC Request for Additional Information Letter No. 355 Related to ESBWR Design Certification Application - Auxiliary Systems - RAI Number 9.4-53 S01 – DCD Markups

cc:

AE Cubbage	USNRC (with enclosures)
J G Head	GEH/Wilmington (with enclosures)
DH Hinds	GEH/Wilmington (with enclosures)
LF Dougherty	GEH/Wilmington (with enclosures)
eDRF Section	0000-0089-7042 Rev 2

Enclosure 1

MFN 10-155

Supplement to Revised Response to Portion of NRC Request for Additional Information Letter No. 355 Related to ESBWR Design Certification Application

Auxiliary Systems

RAI Number 9.4-53 S01

DCD Markups

Table 2.16.2-2

ITAAC For The Reactor Building HVAC

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12a. The Reactor Building HVAC Accident Exhaust Filters maintains the CONAVS served areas of the reactor building at a minimum negative pressure of 62 Pa (-1/4 inch W.G.) relative to surrounding clean areas when operating.	Testing will be performed to confirm that the Reactor Building HVAC Accident Exhaust Filters maintain the CONAVS area at a minimum negative pressure of 62 Pa (-1/4 inch W.G.) relative to surrounding clean areas when operating each filter train.	The time average pressure differential in the as-built CONAVS served areas of the reactor building as measured by pressure differential indicators is minimum negative pressure of 62 Pa (-1/4 inch W.G.).
12b. The Reactor Building HVAC Accident Exhaust Filters meet RG 1.140 and ASME AG-1 requirements for HEPA and carbon filter efficiency.	The Reactor Building HVAC Accident Exhaust Filters meet RG 1.140 and ASME AG-1 requirements for HEPA and carbon filter efficiency.	The as-built RB HVAC Accident Exhaust filter efficiencies meet the acceptance criteria for laboratory and in place testing in accordance with RG 1.140 and ASME AG-1.
13. The Reactor Building concrete acts as a heat sink that passively maintains the temperature of the Reactor Building rooms within an acceptable range for the first 72 hours following a design basis accident.	A Control Building and Reactor Building Environmental Temperature Analysis for ESBWR will be performed using the as-built heat sink dimensions, the as-built heat sink thermal properties, the as-built heat sink exposed surface area, the as-built thermal properties of materials covering parts of the heat sink, and the as-built heat loads.	The bulk average air temperature in the Reactor Building rooms will not exceed the Thermodynamic Environment Conditions Inside Reactor Building for Accident Conditions on a loss of active cooling for the first 72 hours following a design basis accident, given post design basis accident conditions and reconciled to as-built features and heat loads.