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MFN 07-593, Supplement 1

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U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555-0001

Subject: **Response to Portion of NRC Request for Additional Information Letter No. 103 Related to ESBWR Design Certification Application - Heating, Ventilation, and Air Conditioning - RAI Number 9.4-48**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) sent by NRC letter dated July 23, 2007. GEH response to RAI Number 9.4-48 is addressed in Enclosure 1.

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

Sincerely,

Kathy Sedney for

James C. Kinsey
Vice President, ESBWR Licensing

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NRO

Reference:

1. MFN 07-414, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, Senior Vice President, Regulatory Affairs, *Request For Additional Information Letter No. 103 Related To ESBWR Design Certification Application*, dated July 23, 2007

Enclosure:

1. Response to Portion of NRC Request for Additional Information Letter No. 103 Related to ESBWR Design Certification Application – Heating, Ventilation, and Air Conditioning – RAI Number 9.4-48

cc:	AE Cubbage	USNRC (with enclosure)
	GB Stramback	GEH/San Jose (with enclosure)
	RE Brown	GEH/Wilmington (with enclosure)
	eDRF	0000-0076-2814

ENCLOSURE 1

MFN 07-593, Supplement 1

Partial Response to RAI Letter No 103 Related to ESBWR Design Certification Application Heating, Ventilation, and Air Conditioning Systems

RAI Number 9.4-48

NRC RAI 9.4-48

DCD, Tier 2, Revision 3, Section 9.4.7.1 states that the Electrical Building Electric and Electronic Rooms (EER) sub system provides fresh filtered air.

Identify the outside air intake and flow rate on Figure 9.4-12 for the EER or the Electrical Building Technical Support Center HVAC Subsystem (TSCVS) systems and discuss its adequacy in the DCD Tier 2 text. Has the potential effect of hot air being introduced from the outside been taken into consideration with the sizing of cooling coil capacity? Provide a table that shows the major components of the electrical building HVAC System (EBVS) including sub systems and basic design features including flow rates.

GEH Response

The EERVS and TSCVS air inlet louvers are shown on Figure 9.4-12 and are being changed to show them more clearly. The flow rates for EBVS subsystems are listed in Table 9.4-16. DCD Tier 2, Revision 4, has been updated to include a better description of the EBVS. The EBVS has been designed to meet 1% exceedance values, which includes hot air introduction from the outside.

Major component data of the EBVS have been included in DCD Tier 2, Table 9.4-16, Revision 4.

DCD Impact

DCD Tier 2 Figure 9.4-12 will be revised in Revision 5, to more clearly show the Electrical Building inlet louvers, as indicated on the attached markup.

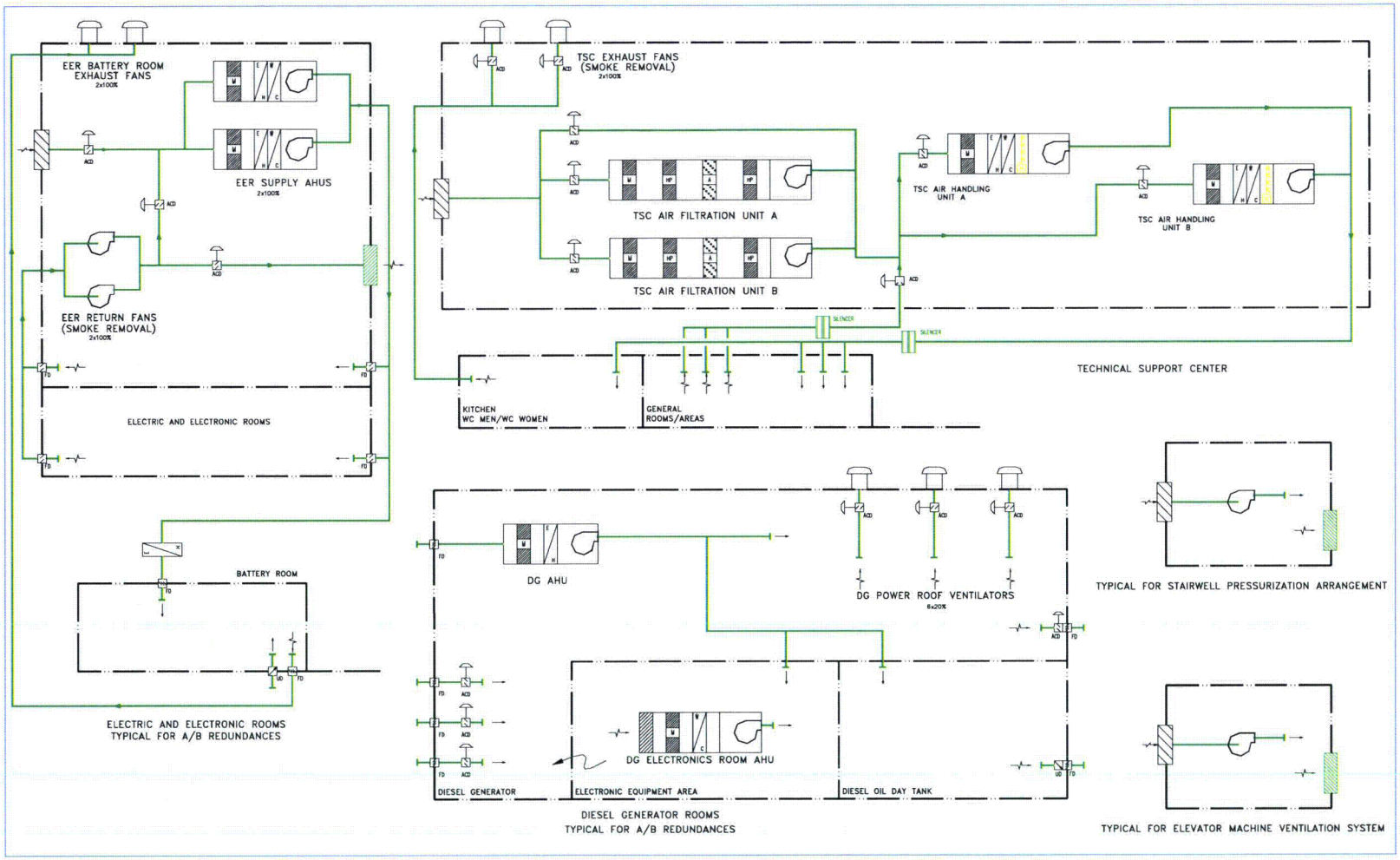

Figure 9.4-12 Electrical Building HVAC System