



GE Energy

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MFN 07-262

Docket No. 52-010

May 11, 2007

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

**Subject: Response to Portion of NRC Request for Additional Information Letter  
No. 84 – Radiation Protection Monitoring – RAI Number 11.5-26**

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

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

Sincerely,

A handwritten signature in cursive script that reads "Kathy Sedney for".

James C. Kinsey  
Project Manager, ESBWR Licensing

Reference:

1. MFN 06-517, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 84 Related to the ESBWR Design Certification Application*, December 7, 2006

Enclosures:

1. MFN 07-262– Response to Portion of NRC Request for Additional Information Letter No. 84 – Radiation Protection – RAI Number 11.2-26

cc: AE Cabbage USNRC (with enclosures)  
GB Stramback GE/San Jose (with enclosures)  
RE Brown GE/Wilmington (with enclosures)  
eDRF 0067-9160

**Enclosure 1**

**MFN 07-262**

**GE Responses to NRC Request for  
Additional Information Letter No. 84  
for ESBWR Design Certification Application**

**Process Radiation Monitoring System**

**RAI Numbers 11.5-26**

**RAI 11.5-26:**

*Address locations for control and monitoring of the Process Radiation Monitoring Systems.*

*Update design control document (DCD) Sections 11.5.3.1 and 11.5.3.2 to describe the location for controls, alarms, and monitoring for the safety related and the non-safety related radiation monitoring systems i.e., state if the controls and displays are located at local panels or if the controls are located in local panels with the displays located in the main control room. If a separate computer system is used for the PRMS then the DCD should describe the computer network and include a preliminary system drawing.*

**GE Response:**

Subsections 11.5.3.1 and 11.5.3.2 of DCD Tier 2, Revision 3 provide information on the location of signal conditioning units (SCUs) and displays for Process Radiation Monitoring Systems (PRMS). Figure 11.5-2 provides a preliminary system drawing of a typical PRMS channel.

The SCUs process the detector signals, and generate inputs for the Safety-Related Distributed Control and Instrumentation System (Q-DCIS) and Nonsafety-Related Distributed Control and Instrumentation System (N-DCIS). As in all other ESBWR instrumentation and control systems, Q-DCIS and N-DCIS are used for process control, alarm, and display functions of PRMS. A separate computer system is not used. Section 7.1 of DCD Tier 2, Revision 3 provides more information on Q-DCIS and N-DCIS.

For safety-related PRMS, the SCUs are located in the Main Control Room (MCR) back panel area, instead of a local panel. The SCUs are provided with controls and display/alarm indications to facilitate calibration, monitoring, and testing. N-DCIS provides displays for alarm and radiation level at the Main Control room (MCR).

For nonsafety-related PRMS, the SCUs are mounted in local panels with controls and display/alarm indications to facilitate calibration, monitoring, and testing. N-DCIS provides displays for alarm and radiation level at the MCR.

**DCD Impact:**

No changes are required to the DCD for this RAI response.