



GE Energy

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MFN 06-371, Supplement 1

Docket No. 52-010

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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. 60 – Radiation Protection – RAI Number 12.7-3S01**

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,

James C. Kinsey
Project Manager, ESBWR Licensing

Reference:

1. MFN 06-342, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 60 Related to the ESBWR Design Certification Application*, July 7, 2006

Enclosures:

1. MFN 06-371, Supplement 1– Response to Portion of NRC Request for Additional Information Letter No. 60 – Radiation Protection – RAI Numbers 12.7-3S01

cc: AE Cubbage USNRC (with enclosures)
GB Stramback GE/San Jose (with enclosures)
RE Brown GE/Wilmington (with enclosures)
eDRF 0068-4688

Enclosure 1

MFN 06-371, Supplement 1

**Response to Portion of NRC Request for
Additional Information Letter No. 60
Related to ESBWR Design Certification Application**

Radiation Protection

RAI Number 12.7-3S01

NRC RAI No. 12.7-3 S01:

Received by e-mail:

Response indicates that the Radwaste Tunnel is designed to the same standard as the Radwaste building, and that the Radwaste Building is designed to mitigate spills. What design features of these structures prevents leakage from piping and components housed in them from reaching the ground water or environment for the life of the plant? Are these continuous pour, reinforced concrete structures, with no seams or joints? Are there expansion joints at the interfaces between the tunnels and the buildings. If so, how is leakage prevented through them for the life of the plant? Are expansion joints accessible for inspection and maintenance? Do the radwaste tunnels have design features to detect leakage (large acute, or small long term) from the systems into these tunnels? Is there any contaminated piping in the ESBWR design that will be buried in the ground, not routed through one of the radwaste tunnels? Does the Spent Fuel Pool (SFP) have a double liner with a tell-tail leak detection system? The additional information provided does need to be included in the DCD.

GE Response:

The leak detection and leak prevention design features addressed in this RAI were previously provided in the response to RAI 12.7-1 (MFN letter 07-222 dated May 4, 2007). Changes to DCD Tier 2, Section 12.6 were included with the response to RAI 12.7-1, and will be provided in DCD Revision 4. The ESBWR SFP has a single liner with an associated leakage detection system as described in the response to RAI 12.7-1.

DCD Impact:

No further DCD changes will be made in response to this RAI.