



GE Energy

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MFN 07-219

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Subject: **Response to Portion of NRC Request for Additional Information
Letter No. 66 – Safety Analysis – RAI Number 15.5-5**

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,

Kathy Sedney for

James C. Kinsey
Project Manager, ESBWR Licensing

Reference:

1. MFN 06-377, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 66 Related to the ESBWR Design Certification Application*, October 10, 2006

Enclosures:

1. MFN 07-219– Response to Portion of NRC Request for Additional Information Letter No. 66 – Safety Analysis – RAI Number 15.5-5

cc: AE Cabbage USNRC (with enclosures)
GB Stramback GE/San Jose (with enclosures)
RE Brown GE/Wilmington (with enclosures)
eDRF 0065-2621

Enclosure 1

MFN 07-219

**Response to Portion of NRC Request for
Additional Information Letter No. 66
Related to ESBWR Design Certification Application**

Safety Analysis

RAI Number 15.5-5

NRC RAI 15.5-5:

On page 15.5-6 of the ESBWR Design Control Document, Tier 2, Rev. 1, it states: "If the Heat Capacity Temperature Limit is reached, the operator would depressurize the reactor via SRVs [Safety Relief Valves] to maintain margin to suppression pool limits. This operation was not necessary in the ESBWR ATWS [anticipated transient without scram]." It is not clear to the staff, based on the second sentence, whether the first sentence is crediting an operator action for depressurization for the ESBWR, or for a different BWR. Please revise the DCD to provide more clarity.

Regarding the same information, it appears that the TRACG analysis of ATWS/main steam isolation valve (MSIV) closure does not assume operator action. Please clarify whether any of the sequence of events used in the TRACG analysis credits operator action.

GE Response:**Item 1**

The sentence, "If the Heat Capacity Temperature Limit is reached, the operator would depressurize the reactor via SRVs [Safety Relief Valves] to maintain margin to suppression pool limits." is crediting an operator action for depressurization of the reactor if conditions require it.

The sentence, "This operation was not necessary in the ESBWR ATWS." was removed in Revision 3 of DCD Tier 2 Subsection 15.5.4.3.6 for clarification.

Item 2

The TRACG analysis of ATWS MSIV Closure transient response evaluation assumes operator action to:

- 1) Maintain level at TAF + 5ft (1.524 m) after the initial automatic feedwater runback.
- 2) Depressurize the reactor, if the Heat Capacity Temperature Limit (HCTL) curve is reached.

This information is currently described in DCD Tier 2, Revision 3, Page 15.5-6 in Subsection 15.5.4.3.6.

DCD Impact:

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