



**HITACHI**

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MFN 07-699

Docket No. 52-010

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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. 68 Related to ESBWR Design Certification Application - Emergency Core Cooling Systems - RAI Number 6.3-52**

Enclosure 1 contains the GE Hitachi Nuclear Energy (GEH) response to the subject NRC RAI transmitted via the Reference 1 letter.

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

Sincerely,

James C. Kinsey  
Vice President, ESBWR Licensing

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Reference:

1. MFN 06-379, Letter from U.S. Nuclear Regulatory Commission to David H. Hinds, *Request for Additional Information Letter No. 68 Related to ESBWR Design Certification Application*, October 10, 2006

Enclosure:

1. MFN 07-699 - Response to Portion of NRC Request for Additional Information Letter No. 68 Related to ESBWR Design Certification Application - Emergency Core Cooling Systems - RAI Number 6.3-52

cc: AE Cabbage USNRC (with enclosures)  
GB Stramback GEH/San Jose (with enclosures)  
RE Brown GEH/Wilmington (with enclosures)  
eDRF 0000-0075-7741

**Enclosure 1**

**MFN 07-699**

**Response to Portion of NRC Request for  
Additional Information Letter No. 68  
Related to ESBWR Design Certification Application**

**Emergency Core Cooling Systems**

**RAI Number 6.3-52**

**NRC RAI 6.3-52:**

*GE submittal MFN 05-096 "Summary of September 9, 2005 NRC/GE Conference Call on TRACG LOCA SER Confirmatory Items," dated September 20, 2005, states for item 7 that the scram time delay was incorporated into the DCD Chapter 6 LOCA cases. What is the scram time delay used? How was it incorporated into the TRACG input decks? Justify the delay time.*

**GEH Response:**

The SCRAM time delay used in the TRACG input decks for the LOCA events described in DCD Tier 2 Chapter 6 is 2.25 seconds.

This delay time of 2.25 seconds was incorporated into the DCD Tier 2 Chapter 6 loss-of-coolant accident (LOCA) TRACG input decks through a TRIP card that identifies the TRIP number (ITID) as 13, and that includes a trip delay time (TDT) equal to 2.25 seconds.

This TDT of 2.25 seconds is based upon and justified by the following partial time delays:

- 2.00 Seconds for Sensor delay; plus
- 0.05 Seconds for Sensor Trip SCRAM Solenoid to de-energize (Reactor Protection System Logic); plus
- 0.20 Seconds for Scram solenoid de-energize, rods start to move (SCRAM valve open).

**DCD Impact:**

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