September 15, 2006

ORGANIZATION: General Electric Nuclear Energy (GE)

PROJECT: Economic Simplified Boiling Water Reactor (ESBWR) Design Certification Review

SUBJECT: SUMMARY OF A MEETING HELD ON AUGUST 10, 2006, TO DISCUSS THE ESBWR ANTICIPATED TRANSIENT WITHOUT SCRAM (ATWS) EVENT AND CFD MODELING OF THE ESBWR CORE BYPASS

The Nuclear Regulatory Commission (NRC) held a meeting with General Electric Nuclear Energy (GE) on August 10, 2006, at GE's offices in San Jose, CA., to discuss topical report NEDE-33083P, Supplement 2, "TRACG Application for ESBWR Anticipated Transient Without Scram Analyses," submitted on January 13, 2006. A list of attendees is provided as Enclosure 1.

This meeting was closed to the public. During the meeting the NRC and GE discussed GE's proprietary code TRACG, as it is being applied to anticipated transient without scram (ATWS) analyses, GE's computational fluid dynamics analyses regarding ATWS, and the geometry of ESBWR core internals. A non-proprietary summary of the meeting is provided in Enclosure 2. No handouts were provided at the meeting.

/RA/

Martha C. Barillas, Project Manager
ESBWR/ABWR Projects Branch
Division of New Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 52-010

Enclosures: As stated

cc w/encls: See next page

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ADAMS ACCESSION NO: ML062550038

OFFICE	PM/NESB	DNRL/PM	DNRL/BC
NAME	PYarsky	MBarillas	JColaccino
DATE	09/12/2006	09/12/2006	09/15/2006

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MEETING WITH GENERAL ELECTRIC
AUGUST 10, 2006

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Benjamin Parks	NRR
Jose March-Leuba	ORNL NRC contractor
Christopher Boyd	RES
Crystal Thrall	NRR/DSS
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Wayne Massie	GENE
Wayne Marquino	GENE
Chester Cheung	GENE
Kelly Norton (via phone)	GENE
Jim Tallman (via phone)	Global Research Center

Non-proprietary Summary of August 10, 2006, Meeting

The purpose of the meeting was to discuss anticipated transient without scram (ATWS) analyses for the economic simplied boiling water reactor (ESBWR). By letter dated July 31, 2006, General Electric (GE) requested that this meeting be closed to public attendance because the topics of discussion were of a proprietary nature. The NRC staff reviewed the meeting topics and concluded that the information to be discussed was proprietary.

On August 10, 2006, the NRC staff toured the BWR Services Training Facility in San Jose, CA. The purpose of the tour was to familiarize the staff with the specific geometry of core internals similar to those in the ESBWR design as they relate to flow in the core bypass during postulated ATWS events.

Following the tour the NRC and GE staffs discussed various topics relating to ATWS analyses, including the analysis of boron transport during isolation ATWS events. The NRC staff discussed the response to RAI 21.6 53b on core bypass environmental conditions and clarified RAI 21.6-77 as it relates to transient computational fluid dynamic analysis of boron transport and bypass flow during an main steam isolation valve (MSIV) closure ATWS scenario. The NRC staff found GE's response to RAI 21.6-53b to be adequate.

The GE staff also described progress on model nodalization for ATWS analyses with boron injection using the proprietary TRACG code. GE described their calculations and the NRC staff agreed that the information described by GE would adequately address RAIs 21.6-8, 21.6-40, and 21.6-41.

The NRC staff clarified RAI 21.6-51 on ATWS stability. Namely, the GE and the NRC staffs discussed the potential for instabilities during non-isolation ATWS events. GE will provide additional information regarding non-isolation ATWS, including additional analyses performed with TRACG.

GE provided an overview of planned changes to the ESBWR isolation condenser return line and the automatic depressurization system (ADS) setpoint that are intended to improve the ESBWR transient response. GE informed the staff that details of these changes will be described in Revision 2 of the design control document (DCD).

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