



HITACHI

GE Hitachi Nuclear Energy

Jerald G. Head

Senior Vice President
Regulatory Affairs

P.O. Box 780
3901 Castle Hayne Road
MC A09
Wilmington, NC 28402
USA

T 910 819 5692
F 910 362 5692

MFN 11-193

Docket 52-010

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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

SUBJECT: 10 CFR 50.46 Annual Report for the ESBWR Standard Plant Design

Pursuant to 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light-water Reactors," GE Hitachi Nuclear Energy (GEH) is submitting this report to document any emergency core cooling system (ECCS) evaluation model changes or errors that affect the temperature calculation for the ESBWR Standard Plant Design. This is the first annual report for the ESBWR Standard Plant Design as submitted in letter number MFN 10-352 (Reference 1) dated December 2, 2010 and it documents that no changes have occurred.

The information included in this letter is generic and is expected to apply to all COL applications referencing the ESBWR Design Certification Application. By copy of this letter, COL Applicants are hereby notified of any changes or errors in the ESBWR Standard Design PCT as required by 10 CFR 50.46(a)(3)(iii).

Please contact me if you have any questions regarding this information, copying the prospective COL Applicants included on the cc: list of this letter.

Sincerely,

Jerald G. Head
Senior Vice President, Regulatory Affairs

No commitments are made in this letter or its enclosures.

Reference

1. MFN 10-352, Richard Kingston to US NRC, ESBWR Standard Plant Design Certification Application Design Control Document, Revision 9, Tier 1 and Tier 2 dated December 2, 2010.

Enclosure

1. ESBWR Standard Plant Design 10 CFR 50.46 Annual Report

cc: AE Cubbage, (USNRC) (with enclosure)
PW Smith (DTE Energy) (with enclosure)
M Brandon (DTE Energy) (with enclosure)
JR Douet (Entergy) (with enclosure)
H. Madronero, GEH/Wilmington (with enclosure)
W. Schumitsch, GEH/Wilmington (with enclosure)
PM Yandow, GEH/Wilmington (with enclosure)

ENCLOSURE 1

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ESBWR Standard Plant Design **10 CFR 50.46 Annual Report**

Plant Name: ESBWR Standard Plant Design

Docket Number: 52-010

Utility Name: N/A

Evaluation Model: TRACG

Limiting LOCA: Isolation Condenser Drain Line Break

PCT Change Item	Net PCT Effect	Absolute PCT Effect
Prior 10 CFR 50.46 Changes or Error Corrections – Previous Years	$\Delta PCT = 0 \text{ }^{\circ}\text{F (K)}$	$\Delta PCT = 0 \text{ }^{\circ}\text{F (K)}$
10 CFR 50.46 Changes or Error Corrections – This year	$\Delta PCT = 0 \text{ }^{\circ}\text{F (K)}$	$\Delta PCT = 0 \text{ }^{\circ}\text{F (K)}$
Absolute Sum of 10CFR 50.46 Changes		$\Delta PCT = 0 \text{ }^{\circ}\text{F (K)}$

There is no core uncover and no core heat up in an ESBWR LOCA. The Peak Clad Temperature (PCT) is the same as that during normal operating condition, that is, the ΔPCT during an ESBWR LOCA is zero.

The sum of the ΔPCT from the most recent analysis using an acceptable evaluation model and the estimates of ΔPCT impact for changes and errors identified since this analysis is less than 2200 $^{\circ}\text{F}$ (1204 K).