



HITACHI

GE Hitachi Nuclear Energy

Richard E. Kingston
Vice President, ESBWR Licensing

P.O. Box 780
3901 Castle Hayne Road, M/C A-65
Wilmington, NC 28402 USA

T 910.819.6192
F 910.362.6192
rick.kingston@ge.com

MFN 10-175

Docket No. 52-010

June 15, 2010

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Subject: **Clarification to Design Control Document, Tier 2, Table 3H-10, Thermodynamic Environmental Conditions Inside Control Building for Accident Conditions, Resulting From ACRS Discussions**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) response to an ACRS comment related to the qualification of electronic equipment in the control room habitability area (CRHA) discussed in Reference 1. DCD Table 3H-10 has been revised to clarify the use of equipment type-testing for electronic equipment in the CRHA envelope. The DCD changes are in Enclosure 1.

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

Sincerely,

Richard E. Kingston
Vice President, ESBWR Licensing

Reference:

1. Official transcript of Proceedings, Nuclear Regulatory Commission, Advisory Committee on Reactor Safeguards, ESBWR Subcommittee: Open Session Dated Wednesday, May 19, 2010 (Accession # ML101540476).

Enclosure:

1. Clarification to Design Control Document, Tier 2, Table 3H-10, Thermodynamic Environmental Conditions Inside Control Building for Accident Conditions, Resulting From ACRS Discussions; DCD Markup

cc: AE Cabbage USNRC (with enclosures)
JG Head GEH/Wilmington (with enclosures)
MJ Colby GEH/Wilmington (with enclosures)
PM Yandow GEH/Wilmington (with enclosures)
eDRF Section 0000-0118-8454

MFN 10-175

Enclosure 1

**Clarification to Design Control Document,
Tier 2, Table 3H-10,
Thermodynamic Environmental Conditions Inside
Control Building for Accident Conditions,
Resulting From ACRS Discussions**

DCD Markup

Table 3H-10

Thermodynamic Environment Conditions Inside Control Building for Accident Conditions

| Plant Zone/Typical Equipment ⁽³⁾ | | | |
|--|--|---|--|
| Safety-related portions of CRHA Ventilation Subsystem Room Nos 3406, 3407 (Figure 1.2-5) | Time ⁽¹⁾ Temp. °C (°F) Press. Pa (psi) Humidity | 0 h - 72 h 50 (122)Max Not controlled Not controlled | 10 days – 100 days 26 (79) Max Positive Pressure Not controlled |
| Electrical chases Room Nos 3250, 3261 (Figures 1.2-2 to 1.2-5) | Time ⁽¹⁾ Temp. °C (°F) Press. Pa (psi) Humidity | 0 h – 72 h 110 (230) Max Not controlled Not controlled | 10 days – 100 days 26 (79) Max Positive Pressure Not controlled |
| Control Room Habitability Area Main control room panels (Outlined area on Figure 3H-1) | Time ⁽¹⁾ Temp. °C (°F) ⁽²⁾ Press. Pa (psi) Humidity | 0 – 72 h 33.9 (93) Average Bulk Max allowed 31 (4.5E-3) Positive Not controlled | 10 days 23.3 (74) max 31 (4.5E-3) Positive 60% Max |
| Div 1, 2, 3 and 4 electrical rooms Safety-related DCIS panels Room Nos 3110, 3120, 3130 and 3140 (Figure 1.2-2) | Time ⁽¹⁾ Temp. °C (°F) Press. Pa (psi) Humidity | 0 h - 72 h 45 (113)Max Not controlled Not controlled | 10 days – 100 days 26 (79) Max Positive Pressure Not controlled |

(1) Time indicates the time after the occurrence of the accident.

(2) After 72h, the temperature decreases to the temperature value shown for 10 days.

(3) Electronic equipment is type tested for 60°C (140°F) during 72 hours; other equipment could be type tested for higher temperatures according to the above values. In locations within these zones where room temperature is lower than 50°C (122°F), electronic equipment is qualified for the actual calculated temperature within the zone, or the equipment is protected from high temperatures.