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MFN 09-072

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U.S. Nuclear Regulatory Commission
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Subject: **Response to Portion of NRC Request for Additional Information Letter No. 269 Related to ESBWR Design Certification Application – Technical Specifications – RAI Number 16.2-156, Supplement 2**

Enclosures 1 and 2 contain 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 regarding the information provided here, please contact me.

Sincerely,

Richard E. Kingston
Vice President, ESBWR Licensing

DO68
MRO

Reference:

1. MFN 08-885, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Request for Additional Information Letter No. 269 Related to ESBWR Design Certification Application*, October 31, 2008

Enclosures:

1. MFN 09-072 – Response to Portion of NRC Request for Additional Information Letter No. 269 Related to ESBWR Design Certification Application – Technical Specifications – RAI Number 16.2-156, Supplement 2
2. MFN 09-088 – DCD Markups for RAI Number 16.2-156, Supplement 2

cc: AE Cabbage USNRC (with enclosures)
RE Brown GEH (with enclosures)
DH Hinds GEH (with enclosures)
eDRF 0096-6376

Enclosure 1

MFN 09-072

**Response to Portion of NRC Request for
Additional Information Letter No. 269
Related to ESBWR Design Certification Application
- Technical Specifications -
RAI Number 16.2-156, Supplement 2**

NRC RAI 16.2-156, Supplement 2

In consideration of the response to RAI 16.2-156 Supplement 1, the staff requests that the applicant revise the proposed setpoint control program specification by adopting the model specification provided in Enclosure 2. It is the staff's position that this will be necessary for the staff to conclude that the SCP satisfies 10 CFR 50.36(c)(1)(ii)(A). Note that the staff has removed its request to include a quarterly Channel Operational Test (COT) in the generic TS. It has also revised the SCP to state that the approved setpoint methodology will control changes to the specified setpoint program document, instead of 10 CFR 50.59. The model SCP also includes a requirement to submit the setpoint program document to the NRC on the same schedule that is specified for submitting the COLR. In addition, the model SCP reflects the recent change in 10 CFR 50.36 to restore the original paragraph designations (73 FR 54931, dated September 24, 2008; effective October 24, 2008)

GEH Response

GEH has revised Generic Technical Specification (GTS) 5.5.11, "Setpoint Control Program (SCP)," as follows:

1. GTS 5.5.11, paragraph d is revised to include a statement that revisions to the document specifying LTSP, NTSP_F, AV, AFT, and ALT values shall be governed by the approved setpoint methodology. The requirement for changes to the SCP to be implemented under 10 CFR 50.59 will be retained. The setpoint methodology itself does not provide change processes for the SCP document.
2. GTS 5.5.11, paragraph d is revised to require the SCP, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.
3. GTS 5.5.11, paragraph a is revised to change the reference to the regulatory requirements concerning technical specification requirements for limiting safety system settings from "10 CFR 50.36(d)(1)(ii)(A)" to "10 CFR 50.36(c)(1)(ii)(A)."

As discussed in response to RAI 16.2-156, Supplement 1 (MFN 08-104, Supplement 1 dated July 8, 2008), certain portions of the NRC model SCP are not adopted in the GTS Administrative Controls section requirement for the SCP.

Those portions of the staff-proposed SCP that are not incorporated in the GTS SCP are related to review criteria for the setpoint methodology, not for the SCP itself. Including these review requirements in the proposed Reviewer's Notes provides assurance that the NRC-approved setpoint methodology referenced in the SCP meets those review requirements. This is consistent with other similar documents described in the GTS, such as the Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR), and the Core Operating Limits Report (COLR). The GTS COLR and the PTLR descriptions provide Reviewer's Notes describing the scope of the respective reports. Requirements related to the respective methodologies are not included in these descriptions.

DCD Impact

DCD Chapter 16 will be revised as described above and as shown in Enclosure 2.

Enclosure 2

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DCD Markups for

RAI Number 16.2-156, Supplement 2

5.5 Programs and Manuals

5.5.10 Battery Monitoring and Maintenance Program

This Program provides for battery restoration and maintenance, which includes the following:

COL 16.0-42-AH
5.5.10-1

- a. With battery cell float voltage < [2.18] V, actions to restore cell(s) to \geq [2.18] V and perform SR 3.8.3.5, and
- b. Actions to determine the cause and correct when cell temperatures deviate more than 3°C (5°F) from each other.

5.5.11 Setpoint Control Program (SCP)

- a. The Setpoint Control Program (SCP) implements the regulatory requirement of 10 CFR 50.36(d)(1)(ii)(A) that technical specifications will include items in the category of limiting safety system settings (LSSS), which are settings for automatic protective devices related to those variables having significant safety functions.

COL 16.0-2-H
5.5.11-1

- b. The Limiting Trip Setpoint (LTSP), Nominal Trip Setpoint (NTSP_F), Allowable Value (AV), As-Found Tolerance (AFT), and As-Left Tolerance (ALT) for each Technical Specification required automatic protection instrumentation function shall be calculated in conformance with the instrumentation setpoint methodology previously reviewed and approved by the NRC in NEDE- 33304P-A, "GEH ABWR/ESBWR Setpoint Methodology," [Revision #, dated Month dd, yyyy, (MLxxxxxxx)], and the conditions stated in the associated NRC safety evaluation, [Letter to GEH from NRC, Title, dated Month, dd, yyyy, (MLxxxxxxx)].
- c. For each Technical Specification required automatic protection instrumentation function, performance of a CHANNEL CALIBRATION surveillance shall include the following:
 1. The as-found value of the instrument channel trip setting shall be compared with the previous as-left value or the specified NTSP_F.
 - i. If the as-found value of the instrument channel trip setting differs from the previous as-left value or the specified NTSP_F by more than the pre-defined test acceptance criteria band (i.e., the specified AFT), then this condition the instrument channel shall be trended and evaluated within the plant's corrective action program, to verify that it is functioning in accordance with its design basis before declaring the surveillance requirement met and returning the instrument channel to service. This condition shall be dispositioned by the plant's corrective action program.

5.5 Programs and Manuals

5.5.11 Setpoint Control Program (continued)

- ii. If the as-found value of the instrument channel trip setting is less conservative than the specified AV, then until 5.5.11.c.1.i and 5.5.11.c.2 are met, the surveillance requirement is not met and the instrument channel shall be immediately declared inoperable.
- 2. The instrument channel trip setting shall be set to a value within the specified ALT around the specified NTSP_F at the completion of the surveillance; otherwise, the surveillance requirement is not met and the instrument channel shall be immediately declared inoperable.
- d. The SCP shall establish a document containing the current value of the specified LTSP, NTSP_F, AV, AFT, and ALT for each Technical Specification required automatic protection instrumentation function and references to the calculation documentation. Changes to this document shall be governed by the regulatory requirements of 10 CFR 50.59. In addition, changes to the specified LTSP, NTSP_F, AV, AFT, and ALT values shall be governed by the approved setpoint methodology. This document, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.5.12 Control Room Habitability Area (CRHA) Boundary Program

A CRHA Boundary Program shall be established and implemented to ensure that CRHA habitability is maintained such that, with an OPERABLE CRHA Heating, Ventilation, and Air Conditioning (HVAC) Subsystem (CRHAVS), CRHA occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, [hazardous chemical release,] or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRHA under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 0.05 Sv (5 rem) total effective dose equivalent (TEDE) for the duration of the accident. The program shall include the following elements:

- a. The definition of the CRHA and the CRHA boundary.
- b. Requirements for maintaining the CRHA boundary in its design condition including configuration control and preventive maintenance.
- c. Requirements for (i) determining the unfiltered air inleakage past the CRHA boundary into the CRHA in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRHA

COL 16.0-1-A
5.5.12-1