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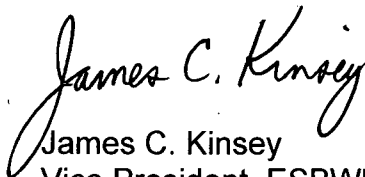
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**Subject: Response to Portion of NRC Request for Additional
Information Letter No. 126 Related to ESBWR Design
Certification Application, RAI Number 14.3-272**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) sent by NRC letter dated December 20, 2007 (Reference 1). The GEH response to RAI Number 14.3-272 is addressed in Enclosure 1.

If you have any questions or require additional information regarding the information provided here, please contact me.

Sincerely,



James C. Kinsey
Vice President, ESBWR Licensing

DO68
NRC

Reference:

1. MFN 07-718, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Request for Additional Information Letter No. 126 Related to ESBWR Design Certification Application*, December 20, 2007

Enclosures:

1. Response to Portion of NRC Request for Additional Information Letter No. 126 Related to ESBWR Design Certification Application, RAI Number 14.3-272

cc: AE Cubbage USNRC (with enclosure)
GB Stramback GEH/San Jose (with enclosure)
RE Brown GEH/Wilmington (with enclosure)
DH Hinds GEH/Wilmington (with enclosure)
eDRF 0000-0083-4474 – RAI 14.3-272

Enclosure 1

MFN 08-086 Supplement 33

Response to Portion of NRC Request for

Additional Information Letter No. 126

Related to ESBWR Design Certification Application

RAI Number 14.3-272

NRC RAI 14.3-272

NRC Summary:

ADS Timer delay time

NRC Full Text:

DCD Tier 1, Section 2.1.2 Nuclear Boiler System

In table 2.1.2-2 ITTAC #12 was deleted in DCD Revision 4. The list of changes provided by GEH indicates that it is relocated to I&C ITAAC. The staff reviewed 2.2.13, Engineered Safety Features SSLC, and there is not verification of the ADS timers provided. This items should be included in the ITACC. Please update DCD Tier 1 accordingly.

GEH Response

Automatic and manual control of the Automatic Depressurization System (ADS) is performed by software running on the Safety System Logic and Control/Engineered Safety Features (SSLC/ESF) platform, as described in Tier 1, Subsection 2.2.13. The SSLC/ESF platform software will be developed in accordance with the ESBWR software development process described in Tier 1, Section 3.2.

Overlapping tests will be used to confirm the operation of the system, with the hardware tests described in Subsection 2.1.2 and control system functional tests described in Subsection 2.2.13. Operational testing of the software, including the use of proper time delay values, operation of the manual functions, operation of automatic functions, and interlocks, is described in Tier 1, Table 3.2-1, {{Design Acceptance Criteria}} ITAAC.

The specific time delay values were deleted from Tier 1 because they are subject to change, infinitely programmable, and no longer critical to the specification or operation of the SSLC/ESF hardware.

Table 2.2.13-4, ITAAC 1, 2, and 3 provide the required verification of the ADS timers.

Timers are defined as time delay interlock functions in Table 2.2.13-3. Bounding (but not specific) ADS time delay values are shown in Tier 2, Table 7.3-3. The specific time delay values are subject to change because they will be determined by the plant-specific setpoint analyses described in Table 2.2.15-2, Item 10.

DCD Impact

DCD Tier 1 Table 2.2.13-4, Items 2 and 3 will be revised as shown in the attached markup.

Table 2.2.13-4

ITAAC For Safety System Logic and Control/ESF System

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The SSLC/ESF functional arrangement is described in Table 2.2.13-1.	Inspection and/or tests will be conducted in the as-built configuration as described in Table 2.2.13-1.	Inspection and/or test report(s) exist(s) and conclude(s) that the system conforms to the functional arrangement as described in Table 2.2.13-1.
2. SSLC/ESF automatic trip initiators and associated interfacing systems are described in Table 2.2.13-2.	See Subsection 2.2.15 <u>Test(s) and type test(s) will be performed on the as-built system using simulated signals.</u>	See Subsection 2.2.15 <u>Test and type test report(s) document the system is capable of performing the functions defined in Table 2.2.13-2.</u>
3. SSLC/ESF controls, interlocks, and bypasses in the main control room (MCR) are defined in Table 2.2.13-3.	See Subsection 2.2.15 <u>Test(s) and type test(s) will be performed on the as-built system using simulated signals.</u>	See Subsection 2.2.15 <u>Test and type test report(s) document that the system controls and interlocks exist, can be retrieved in the main control room, or are performed in response to simulated signals and manual actions as defined in Table 2.2.13-3.</u>
4. Conformance with IEEE Std. 603 requirements by the safety-related control system structures, systems, and components is addressed in Subsection 2.2.15.	See Subsection 2.2.15.	See Subsection 2.2.15.
5. SSLC/ESF minimum inventory of alarms, displays, and status indications in the main control room (MCR) are addressed in Section 3.3.	See Section 3.3.	See Section 3.3.
6. The equipment qualification of SSLC/ESF components is addressed	See Section 3.8.	See Section 3.8.