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United States Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Modifications to Toshiba's "Topical Report of NRW-FPGA-Based I&C System Design Process"

References:

1. Letter, K. Okamura (Toshiba) to NRC, March 14, 2008, subject: Submittal of Toshiba Topical Report for NRW-FPGA-Based I&C System Design Process, No. UTLR-0001-P.
2. Letter, K. Okamura (Toshiba) to NRC, November, 16 2007, subject: Submittal of Toshiba Topical Report for NRW-FPGA-Based I&C System Design Process, No. UTLR-0001-NP.
3. NRC Project Number 729; NRC Docket Number 00000729.

Ladies and Gentlemen:

In March 2008, Toshiba submitted our Topical Report on NRW-FPGA-Based I&C System Design Process to the USNRC Document Control Desk. The proprietary version was submitted via the Reference 1 letter, and the non-proprietary version was submitted via the Reference 2 letter. This Topical Report describes Toshiba's design, development, peer review, test, qualification, and manufacturing processes for NRW-FPGA-based I&C systems for US nuclear safety-related applications. Toshiba submitted this topical report under the NRC licensing topical report program for review for referencing in licensing actions.

Based on discussions held with the NRC during a meeting held on July 17, 2008, Toshiba is committing to make the modifications to the Topical Report that are identified in Attachment 1 to this letter. The modifications will be incorporated into the report if and when a revision to the report is next issued. These modifications to our Topical Report are being submitted for NRC review as part of a Project No. 729 activity (Reference 3). These modifications are not proprietary. Toshiba has no objection to public disclosure of these modifications.

Should you have any questions about these modifications, please contact Ms. Rossnyev Alvarado at (703) 519-0200 or via e-mail at ralvarado@mpr.com, or Mr. Hiroshi Miyanaga via e-mail at hiroshi.miyanaga@glb.toshiba.co.jp.

TO/O
NRR

Sincerely,



Koichiro Oshima
Senior Manager
Plant Project Engineering Department
Nuclear Energy Systems & Services Division
POWER SYSTEMS COMPANY
TOSHIBA CORPORATION

cc w/ attachment: Ms. Stacey Rosenberg, Mr. Eric Bowman, Mr. William Kemper, USNRC

ATTACHMENT 1
**Modifications to Toshiba Topical Report for NRW-FPGA-Based I&C System Design Process,
UTLR-0001-P/NP**

For each modification, the existing text is shown, with strikethrough for text to be removed and italics for text to be added.

Page 1 of 116: Third sentence of fifth paragraph

The FPGA-based I&C systems described in this topical report are designed as ~~replacement for the existing analog and CPU-based I&C systems in use in US nuclear applications~~ *an alternative to analog and microprocessor-based I&C systems for use in safety-related US nuclear applications.*

Page 27 of 116: First sentence of first paragraph of Section 3.2

The FPGA-based I&C systems described in this topical report are designed as ~~replacement for the existing analog and CPU-based I&C systems in use in US nuclear applications~~ *an alternative to analog and microprocessor-based I&C systems for use in safety-related US nuclear applications.*

Page 42 of 116: Second full paragraph

~~Toshiba notes that none of the active instrumentation and controls in a nuclear power plant performs functions that are SIL 3 or SIL 4. The fuel cladding, the reactor vessel, and the containment dome provide the primary protection against harm to the public. The safety-related instrumentation and controls protect those boundaries, with multiple lines of defense in depth to protect each boundary. Thus, the safety-related instrumentation and controls do not require processing to a high SIL rating. However, the~~ *The regulator expects, and Toshiba concurs, that highly safe, reliable, and available equipment requires use of a process with sufficient independence to detect and cause the correction of any design errors in the instrumentation and controls. Toshiba believes that the level of independence provided, described below, is sufficient. Toshiba's process conforms to SIL 4 when modified by the exception provided in Section 3 of NRC RG 1.168, Rev. 1 (Reference 10).*