

July 17, 2012

Mr. Robert W. Schrauder
Vice President - Licensing, US ABWR Projects & Technologies
Toshiba America Nuclear Energy Corporation
3545 Whitehall Park Drive, Suite 500
Charlotte, NC 28273

SUBJECT: ACKNOWLEDGEMENT OF REQUEST TO WITHDRAW THE TOPICAL
REPORT FOR TOSHIBA FPGA-BASED SAFETY-RELATED
INSTRUMENTATION AND CONTROL SYSTEMS, REVISION 0

Dear Mr. Schrauder:

By letter dated November 15, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML113530593), Toshiba Corporation (Toshiba) submitted a Topical Report (TR) entitled "Topical Report for Toshiba FPGA-Based Safety-Related Instrumentation and Control Systems, Revision 0," for U.S. Nuclear Regulatory Commission (NRC) review and approval.

By letter dated June 22, 2012 (ADAMS Accession No. ML12187A162), Toshiba requested to withdraw the TR from NRC staff review. The NRC staff acknowledges your request to withdraw the TR. The NRC staff activities on the review have ceased and the associated Technical Assignment Control number has been closed.

The NRC staff notes that its review to date has identified that your TR contained excessive proprietary marking and did not provide the following technical information in sufficient detail to enable the NRC staff to complete its detailed review. Therefore, if you decide to re-submit the TR, the following items must be addressed:

- The TR contains large sections of text that are marked as proprietary that clearly are not proprietary per Title 10 of the *Code of Federal Regulations* Part 2.390.
- The TR did not supply a definitive list of the components, with part number and revision number, which may be used as part of a qualified system.
- The TR did not provide adequate description of the system's components and their capabilities and limitations. While some items may be referenced, a description of the components and how they are used in the various safety systems must be in the TR.
- The TR did not address Interim Staff Guidance (ISG) 4. The TR should include how the system meets each of the individual points of ISG 4. Some points will be application specific and should clearly state what application specific information is required to show compliance for that point so that the NRC staff may write clear, simple application specific action items into the safety evaluation.

- The TR did not thoroughly address Regulatory Guide (RG) 1.152. The limited information on secure development operational environment should address how RG 1.152 criteria are met for each phase of the development. If the phases of Toshiba's process do not correlate directly to the phases in RG 1.152, the TR should clarify how the phases correlate and how each phase meets the criteria of RG 1.152.
- Appendix C of UTLR-0018P, Revision 0, is an Institute of Electrical and Electronics Engineers 603-1991 compliance table. While it addresses each clause individually, it does not adequately describe how the criteria is met for most of the clauses. Typically, the table provides reference to another document. It is clear that not all the documents referenced in the TR are docketed. If they are not docketed, there must be adequate description given on the docket. Also, power range monitor (PRM) documents are often referenced and it is not clear if the PRM reference is intended to adequately describe compliance for other types of safety systems such as the reactor protection system or engineered safety features actuation system.

As noted above and discussed in the closed meeting on June 19, 2012 (meeting summary in ADAMS at Accession No. ML12195A345), the NRC staff acceptance review is not complete. The noted items are not intended to indicate a complete list of deficiencies. Please refer to ISG-6 (ADAMS Accession No. ML110140103) and the Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [light water reactor] Edition – Instrumentation and Controls (NUREG-0800, Chapter 7) (ADAMS Accession No. ML052340514) for a more complete list of requirements the TR should address.

If you have any questions, please contact the Project Manager, Jonathan Rowley, at (301) 415-4053.

Sincerely,

/RA/

John R. Jolicoeur, Chief
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

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Docket No. 729

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NRR-106

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