



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 1, 2020

Mr. James Powers  
Vice President, Nuclear Island & Business Development  
Toshiba America Energy Systems Corporation  
3735 Glen Lake Drive  
Suite 200  
Charlotte, NC 28208

SUBJECT: FINAL SAFETY EVALUATION FOR TOSHIBA "LICENSING TOPICAL REPORT FOR TOSHIBA NRW [NONREWRITABLE]-FPGA [FIELD PROGRAMMABLE GATE ARRAY]-BASED INSTRUMENTATION AND CONTROL SYSTEM FOR SAFETY-RELATED APPLICATION," UTLA 0020P, REVISION 2 (CAC NO. ME9861; EPID L-2012-TOP-0003)

Dear Mr. Powers:

By letters dated October 9, 2012, March 13, 2013, February 23, 2015, and August 24, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML12292A320, ML13080A206, ML15062A183, and ML15246A174), Toshiba Corporation (Toshiba) submitted the Topical Report (TR), "Toshiba NRW [Nonrewritable]-FPGA [Field Programmable Gate Array]-Based Instrumentation and Control System for Safety Related Applications," to the U.S. Nuclear Regulatory Commission (NRC) staff for review. By Email dated March 25, 2020, the NRC staff issued its draft safety evaluation (SE) (ADAMS Accession No. ML20080F708).

Toshiba provided comments on the draft SE by letter dated May 14, 2020 (ADAMS Accession No. ML20143A264). The comments identified proprietary information, accuracy, and clarity.

The NRC staff has found the Toshiba TR acceptable for referencing in licensing applications for nuclear power plants to the extent specified and under the limitations delineated in the TR and in the enclosed final SE. The final SE defines the basis for our acceptance of the TR.

Our acceptance applies only to material provided in the subject TR. We do not intend to repeat our review of the accepted material described in the TR. When the TR appears as a reference in license applications, our review will ensure that the material presented applies to the specific plant involved. License amendment requests that deviate from this TR will be subject to a plant-specific review in accordance with applicable review standards.

NOTICE: The enclosure transmitted herewith contains Proprietary Information. When separated from enclosure, this transmittal document is decontrolled.
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In accordance with the guidance provided on the NRC website, we request that Toshiba publish accepted versions of the proprietary and nonproprietary TR, within three months of receipt of this letter. The accepted versions shall incorporate this letter and the enclosed final SE after the title page.

For non-proprietary (-NP) version, Toshiba shall strike the proprietary information markings on this letter and make the appropriate redactions and adjustments to document security classifications to the enclosed final SE including striking the header and footer for the -NP version of the SE.

Also, the accepted versions must contain historical review information, including NRC requests for additional information (RAI) questions and responses. The accepted versions shall include a “-A” (designating accepted) following the TR identification symbol.

As an alternative to including the RAI questions and responses behind the title page, if changes to the TRs provided to the NRC staff to support the resolution of RAI responses, and the NRC staff reviewed and approved those changes as described in the RAI responses, there are two ways that the accepted version can capture the RAI questions:

1. The RAI questions and responses can be included as an appendix to the accepted version.
2. The RAI questions and responses can be captured in the form of a table (inserted after the final SE) which summarizes the changes as shown in the accepted version of the TR. The table should reference the specific RAI questions and responses which resulted in any changes, as shown in the accepted version of the TR.

If future changes to the NRC’s regulatory requirements affect the acceptability of this TR, Toshiba will be expected to revise the TR appropriately. Licensees referencing this TR would be expected to justify its continued applicability or evaluate their plant using the revised TR.

If you have any questions, please contact the Project Manager for the review, Joseph J. Holonich at 301-415-7297 or via electronic mail at Joseph.Holonich@nrc.gov.

Sincerely,

*/RA/*

Dennis Morey, Chief  
Licensing Processes Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No.: 99902036

Enclosure:  
Final Proprietary SE

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**ADAMS Accession Nos.:**

**ML19309D251 (Letter – Public)**

**ML19309D278 (SE – Non-Public)**

**ML19309D292 (Package)**

**Via e-mail**

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NAME	JHolonich	DHarrison	MWaters	DMorey
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