



Terry J Garrett
Vice President, Engineering

August 2, 2006

ET 06-0032

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Reference: Letter ET 06-0014, dated March 28, 2006, from T. J. Garrett, WCNOC, to USNRC

Subject: Docket No. 50-482: Pre-Application Review – Main Steam and Feedwater Isolation System Controls Replacement

Gentlemen:

The Reference provided notification of Wolf Creek Nuclear Operating Corporation's (WCNOC) plans to replace the main steam and main feedwater isolation valves including the Main Steam and Feedwater Isolation System controls during Refueling Outage 16, scheduled for Spring 2008.

At a meeting with Nuclear Regulatory Commission (NRC) staff on June 28, 2006, regarding WCNOC's plan to submit a licensing application that will use field programmable gate array (FPGA) technology, NRC staff members requested that WCNOC collaborate with the Nuclear Regulatory Research staff members, as well as contract personnel, in the review of this technology. The purpose of the collaboration, and the NRC research, is to assist in the development of generic staff review guidance for this technology.

WCNOC believes there is significant benefit for all involved parties and the nuclear industry in general for this collaboration and has accepted the NRC staff offer. Reviews of FPGAs and other advanced digital technologies, for the direct purpose of developing regulatory guidance, is specifically identified in the NRC Digital System Research Plan (memo transmitted from Paperiello to Dyer, Zimmerman, Strosnider, and Larkins dated April 26, 2006). The proposed Wolf Creek Generating Station (WCGS) application of this technology is a relatively focused application in terms of scope. However, as noted in the NRC staff Research Plan, "Toshiba Corporation has stated that future Toshiba-based safety-related applications in the nuclear industry will be based on FPGA technology." In order to gain full benefits on possible applications of this technology and its implications, WCNOC believes that additional information

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review and staff interactions, above that necessary for a license amendment of this nature, will be needed to achieve the goal of developing industry and staff guidance for use of this technology throughout the nuclear industry. As noted in the Research Plan, "From a safety perspective, it is difficult to assess the correctness of ASIC and FPGA devices without extensive documentation, tools, and review procedures."

We have reviewed the applicable fee exemption regulation (10 CFR 170.11, Exemptions) for applicability in this matter. While we recognize that a licensee-specific amendment request is typically not considered to meet the requirements for an exemption [see 10 CFR 170.11(a)(1)(iii)(C) and (D)], given the unique nature and extent of necessary collaboration, WCNOB believes a fee exemption for that portion of the amendment fees associated with the specific review of the FPGA technology is appropriate and hereby requests such an exemption, in accordance with 10 CFR 170.11(a)(3). If this exemption is not granted, WCNOB believes that other administrative means (such as opening a TAC for NRR staff to utilize during these efforts that is not charged to WCNOB) would help avoid undue burden to our Corporation during these collaborative efforts. As an example, the review of design specifications, test reports and staff interactions, provide significant benefit to the staff's research efforts that would otherwise not be realized. Therefore, your approval of our request is, in our belief, consistent with both the spirit and intent of 10 CFR 170.11.

As indicated during the meeting on June 28, 2006, the Main Steam and Feedwater Isolation System Customer Requirements specification was scheduled to be completed in June 2006. The Customer Requirements specification is available for review upon your request.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4084, or Mr. Kevin Moles at (620) 364-4126.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Terry J. Garrett for".

Terry J. Garrett

TJG/rlt

cc: J. N. Donohew (NRC)
W. B. Jones (NRC)
B. S. Mallett (NRC)
Senior Resident Inspector (NRC)