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To: Dyer, NRR

AUTHOR: C. S. Welty

AFFILIATION: EPRI

ADDRESSEE: Annette Vietti-Cook

SUBJECT: EPRI work relative to electromagnetic interference (EMI)

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August 1, 2007

Ms. Annette L. Vietti-Cook
Secretary to the Commission
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: EPRI Work Relative to Electromagnetic Interference (EMI)

Dear Ms. Vietti-Cook:

During the July 18, 2007 Briefing on Digital Instrumentation & Control (I&C), Chairman Klein asked what work EPRI was doing regarding electromagnetic interference. This letter forwards the follow-up information that I indicated I would provide.

As stated in my opening remarks, in the mid-1990s EPRI funded work in the Nuclear I&C Program to address EMI testing needs, specifically for plant upgrades using digital I&C equipment. That initial work resulted in a document, "Guidelines for Electromagnetic Interference Testing of Power Plant Equipment" (EPRI Report TR-102323), that provides guidance on testing to show that critical equipment will not adversely affect or be affected by EMI in the plant environment. That initial document was accepted by the NRC staff in a 1996 safety evaluation report (SER). As new information in this area has been gained, the document has been updated twice, most recently in November of 2004. In its current version, the guide provides recommended generic test levels for EMI susceptibility and emissions; identifies emissions sources; recommends standards for equipment testing; defines emissions limits; and details recommendations for grounding, separation and control of portable transceivers in the vicinity of EMI-sensitive equipment.

In addition to the published guidelines, we have the following ongoing activities relative to EMI management:

- A periodic two-day seminar/training course to assist utilities in developing an effective program for electromagnetic compatibility (EMC);
- Work to ensure that wireless monitoring and diagnostic technology does not create EMI issues; and
- Work to resolve the few remaining differences in the guidance provided in the EPRI guidelines discussed above and that contained in Regulatory Guide 1.180, Revision 1, "Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation & Control Systems."

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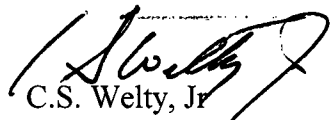
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The overall goal of our EMI work is to provide utilities with a clear, practical and technically defensible approach for managing EMI that is consistent with industry standards and regulatory guidance. We welcome the opportunity to share/exchange research and data on EMI, as well as other topics of mutual interest in the area of digital I&C, with the NRC staff as appropriate.

Please contact me (650-855-2821 or cwelty@epri.com) if you have questions or need further information on my response to this item.

Sincerely,



C.S. Welty, Jr.
Technical Executive

c: A. Marion, NEI
A. Shahkarami, Exelon Generation