

September 11, 2013

Pressurized Water Reactor Owners Group
Attention: Jack Stringfellow
Program Management Office
Westinghouse Electric Company
1000 Westinghouse Drive, Suite 380
Cranberry Township, PA 16066

Dear Mr. Stringfellow:

A recent U.S. Nuclear Regulatory Commission (NRC) Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.59, "Evaluations of Changes, Tests, and Experiments" and Permanent Plant Modifications Inspection team at the Shearon Harris Nuclear Plant reviewed the replacement of obsolete solid state protection system (SSPS) cards with new digital cards featuring complex programmable logic devices (CPLDs). Progress Energy (the licensee) bought these CPLD based cards from Westinghouse and used a screening analysis provided by Westinghouse to determine that the replacement of the SSPS cards with digital cards containing CPLDs would not require further evaluation pursuant to 10 CFR 50.59. The inspection team determined that the change could introduce the possibility of software faults (e.g., common cause failures); therefore, the licensee should have received NRC approval via a license amendment request (LAR) prior to card replacement. Contrary to 10 CFR 50.59(c)(2)(vi), the licensee failed to demonstrate that replacement of the SSPS boards with digital CPLD based cards would not create a possibility of a malfunction of a structure, system, or component (SSC) important to safety with a different result than previously evaluated in the Updated Final Safety Analysis Report. A severity level IV non-cited violation was documented for this issue in NRC inspection report No. 05000400/2013009. Approximately 10 other plants may have also bought these cards and some have installed them or plan to install them shortly. It appears that the other affected plants have also not completed an adequate evaluation of these replacements and may be in violation of 10 CFR 50.59. To date, the only other plant that has been inspected for this issue is the Joseph M. Farley facility (Farley). An unresolved item (URI) has been opened on this issue at Farley as documented in NRC inspection report Nos. 05000348/2013002; and 05000364/2013002.

The NRC staff is considering the appropriate enforcement action for the other plants that have installed the new SSPS cards without performing an adequate 10 CFR 50.59 evaluation. One option being considered is issuing enforcement discretion for plants that self-identify this issue, provided, at least in part, that an operability evaluation finds the system to be operable and the licensee commits to a corrective action to come into compliance within an acceptable time frame. The NRC staff believes an acceptable corrective action to be a LAR referencing an NRC-approved topical report. The NRC staff is also considering at least two additional options: issuing violations to each affected site, or opening URIs at all of the plants that have installed the new SSPS boards until a generic resolution can be completed.

Before determining the appropriate enforcement action for plants affected by this issue, the NRC staff is providing the Pressurized Water Reactor Owners Group (PWROG) a voluntary opportunity to notify the agency in writing of any specific intentions to assist in resolving this issue, including potentially developing and submitting (including a planned submittal date) to the

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NRC staff for review, a topical report on the acceptability of the new digital cards for use in the SSPS. You may also submit any additional information that you believe the NRC should consider in its determination of the appropriate enforcement action for this issue. So that the NRC staff can make a timely decision, if the PWROG chooses to submit a voluntary response, please do so within 15 days of the date of this letter. Correspondence on this issue should be addressed to Norbert Carte at (301) 415-5890 or via electronic mail at Norbert.Carte@nrc.gov.

Sincerely,

/RA/

Patrick L. Hiland, Director
Division of Engineering
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Project No. 700

cc: See next page

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Sincerely,

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