January 20, 2012

Mr. Scott Roberts
CS Innovations
Scottsdale Operations
7400E Tierra Buena Lane, Suite 101
Scottsdale, AZ 85260, USA

SUBJECT: CS INNOVATIONS RESPONSE TO NRC INSPECTION REPORT NO. 99901404/2011-201, NOTICE OF VIOLATION AND NOTICE OF NONCONFORMANCE

Dear Mr. Roberts:

Thank you for your August 19, 2011, letter and phone calls on August 11, September 6, and September 20, 2011, and supplemental information provided to the staff via electronic mail on November 15 and November 18, 2011, in response to the Notice of Violation (NOV) and Notice of Nonconformance (NON) that was discussed in the subject U.S. Nuclear Regulatory Commission (NRC) inspection report (IR).

We have reviewed your letter and supplemental information provided to us and we find that it is generally responsive to the findings described in the NOV and NON documented in IR 99901404/2011-201. However, certain aspects of your response need to be addressed in further detail. The response to NON 99901404/2011-201-04 was inadequate in that it did not address some key issues associated with the development of the automated test equipment (ATE) test tool consistent with the component interface module (CIM) and the safety remote node controller (SRNC) technical requirements derived from the Institute of Electrical and Electronics Engineers (IEEE) Standard 7-4.3.2-2003, "Standard Criteria for Digital Computers in Safety Systems of Nuclear Power Generating Stations," and IEEE Standard (Std.) 603-1991, IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations."

While the response to NON 99901404/2011-201-04 focused on changes made to the Independent Verification and Validation (IV&V) organization and enhancements to the activities performed by the IV&V organization, the response failed to provide adequate evidence that the ATE software test tool was developed in accordance with a prescribed quality assurance program or subject to a suitable documented dedication process. To be able to detect what, if any flaws, a software tool may introduce to a system, an analysis of the tool must be conducted detailing critical attributes of the tool itself and the tool's development. For example, your response did not describe the ATE development process topics including: planning, design, procurement, fabrication, and testing of the tool; the limitations of the tool when compared to the actual system under test (e.g. timing issues, communications issues, lag time of hardware versus software providing a simulated system response); and as a result of the analysis, any potential errors or flaws the tool may introduce into the device under test.

The NRC staff recognizes that the additional measures taken by CSI will be beneficial for IV&V activities. However, the corrective actions do not adequately address the issue that the ATE

testing tool was not subject to a documented development and testing process or documented quality assurance programmatic controls while under development. This is especially important since the ATE serves as the sole test device for the testing of the CIM and the SRNC at the module and unit test level.

The staff may review the implementation of your corrective actions during a future NRC staff inspection to determine that full compliance has been achieved and will be maintained. The staff will be conducting a follow-up inspection during 2012. The focus of the follow-up inspection will be the implementation of corrective actions taken to resolve issues identified in the subject IR.

If you or your staff has any questions regarding this matter, we will be pleased to discuss them with you.

Sincerely,

/RA/

Richard A. Rasmussen, Chief
Quality and Vendor Branch 1
Division of Construction Inspection
and Operational Programs
Office of New Reactors

Docket No. 99901404

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