

OFFICE OF THE SECRETARY  
CORRESPONDENCE CONTROL TICKET

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**PAPER NUMBER:** LTR-09-0283 **LOGGING DATE:** 06/10/2009  
**ACTION OFFICE:** CHRM

**AUTHOR:** Christian Larsen  
**AFFILIATION:** EPRI  
**ADDRESSEE:** CHRM Gregory Jaczko  
**SUBJECT:** Digital Instrumentation and Controls Briefing and Electric Power Research Institute Report - Operating Experience Insights on Common-Cause Failures in Digital Instrumentation and Control Systems, EPRI 1016731

**ACTION:** Information  
**DISTRIBUTION:** RF (letter only)...Encl. to Chairman

**LETTER DATE:** 06/08/2009  
**ACKNOWLEDGED:** No  
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**DATE DUE:** **DATE SIGNED:**

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**CHRISTIAN B. LARSEN**  
Vice President and  
Chief Nuclear Officer

June 8, 2009

The Honorable Gregory B. Jaczko  
Chairman  
U.S. Nuclear Regulatory Commission  
Mail Stop O-16G4  
Washington, DC 20555-0001

Subject: Digital Instrumentation & Controls Briefing and Electric Power Research Institute Report, *Operating Experience Insights on Common-Cause Failures in Digital Instrumentation and Control Systems*, EPRI 1016731

Dear Chairman Jaczko:

During the June 4, 2009 briefing of the Nuclear Regulatory Commission (NRC) by the staff and industry on digital instrumentation and controls (I&C), you requested status of industry's analysis of 300+ digital operating experience events. As mentioned in the meeting, that report is complete, and I have enclosed a copy for your use.

The report's primary finding is that in the 300+ events evaluated, software did not stand out as a dominant contributor to potential and actual CCFs (common-cause failures). In the forty-nine events that involved safety-related systems, there were no actual system-level CCFs and six potential CCFs, only one of which was caused by a software design error.

We are continuing discussions with the NRC staff on this report and other research. We look forward to this collaborative research with NRC Office of Research to further our mutual understanding of the performance of digital I&C systems.

If you or your staff have any questions on this report, or any other aspect of our I&C-related research, please feel free to contact our program manager for I&C, Robert Austin (704-595-2029), [raustin@epri.com](mailto:raustin@epri.com) or myself.

Sincerely,



CLB/tw

Enclosure

cc: Thomas R. Hipschman, US NRC (with Enclosure)

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