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Rahn, David

From: Dittman, Bernard
Sent: Wednesday, September 14, 2011 7:16 AM
To: Rahn, David
Subject: RE: North Anna Seismic Event--Questions Which Would need to be responded to and evaluated by the NRC HQ Staff

David,

Here is some input:

Short-Term (prior to plant restart)

1. For I&C covered by LCOs in the Technical Specification, will the licensee have completed and documented successful performance of all surveillance requirements established in the Technical Specification regardless of the specified surveillance frequency?

Considering that the associated I&C equipment was potentially exposed to a seismic environment that is beyond that enveloped by its design's environmental qualification tests, this licensee action should be sufficient to ensure the LCOs for safe plant operations, as defined by the operating licensing Technical Specification, are met prior to start-up. Technical Specification LCOs should encompass the I&C features that are necessary for continued operation without undue risk to the health and safety of the public and to ensure that the licensing basis is maintained. Therefore, successful performance of LCO surveillance requirements should be sufficient to provide reasonable assurance that no functional damage has occurred to these I&C features.

I wouldn't assume that "all functional testing of RPS and ESFAS" envelopes the above, because the Technical Specifications often include systems beyond RPS and ESFAS, and "functional testing" is vague when it comes to the surveillance requirement definitions, which are very explicit.

2. Does the licensee plans include a repeat of initial start-up testing, such as that identified in Regulatory Guide 1.68 for the test program to demonstrate remote shutdown capability?

No LCOs may exist in the Technical Specification for these features and this (and similar) tests may only have been performed for the initial plant start-up; nevertheless, repeating this (and other) initial start-up tests may be considered necessary to ensure that no functional damage has occurred to associated features. Retesting would be appropriate if these features are considered necessary for continued operation without undue risk to the health and safety of the public.

Long-Term (post restart)

1. What are the licensee's long-term plans to address continued reliability of I&C "basic components" (as defined in 10 CFR Part 21, Reporting of Defects and Noncompliance) that have "Design Control" measures to ensure adequate performance under the most adverse design conditions (as defined by Appendix B to 10 CFR Part 50) to include seismic, but where the corresponding seismic qualification envelope was exceeded by seismic environment that was experienced?

Long-term actions might include systematic identification, inspection, analysis, and replacement of any "basic components" that experienced a seismic environment in excess of its qualified envelope.

These questions are based upon the following (***bold italics*** for emphasis)
Appendix S to Part 50--Earthquake Engineering Criteria for Nuclear Power Plants IV.(a)

(3) Required Plant Shutdown. If vibratory ground motion exceeding that of the Operating Basis Earthquake Ground Motion or if significant plant damage occurs, the licensee must shut down the nuclear power plant. If systems, structures, or components necessary for the safe shutdown of the nuclear power plant are not available after the occurrence of the Operating Basis Earthquake Ground

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