

**Craver, Patti**

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**From:** Prinaris, Andrew *MPK*  
**Sent:** Thursday, August 25, 2011 3:28 PM  
**To:** Istar, Ata  
**Subject:** RE: 1 Pager for Chairman Jack on North Anna Earthquake Issue.docx

The license renewals (LR) for North Anna and Surry Nuclear Power Plants (NPPs) were issued in 2003. The current earthquake may have adversely impacted the aging structures and components (SCs). The effects of aging, however, on the SCs that are in scope of license renewal (LR) process are not discussed in the attached document. It is imperative that the predicted cross-sectional properties are reflected in the analyses. This should include projected wear for each system, at the end of the licensing period, to be reconsidered in order to qualify the SCs, for the period of extended operation (PEO). The reduced cross-sectional properties coupled with the increased seismic estimates could increase the stress levels at critical locations beyond their current design levels.

I worked at both sites, North Anna and Surry NPPs performing numerous modification packages – specifically, those related to the seismic qualification of systems after the Three Mile Island incident. Based on my experience I suggest DLR should look into this issue closely! Following the recent earthquake event in Virginia, the applicant will develop new response spectra curves for different elevations (starting from the ground), as well as for different damping values. If the current safe shutdown earthquake (SEE) response spectra curves would not envelop the new response spectra curves, reevaluation/reanalysis of all SCs in scope need to be performed for justification of continued operation (JCO) using the predicted mechanical properties.

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**From:** Istar, Ata *MPK*  
**Sent:** Thursday, August 25, 2011 2:50 PM  
**To:** Prinaris, Andrew  
**Subject:** 1 Pager for Chairman Jack on North Anna Earthquake Issue.docx

<< File: 1 Pager for Chairman Jaczko on North Anna Earthquake Issue.docx >>

The license renewal (LR) of North Anna and Surry Nuclear Power Plants (NPPs) were issued in 2003. Please note that the effect of aging on structures and components (SCs) that are in scope of license renewal (LR) process were not discussed in the attached document. It is imperative that predicted cross-sectional properties, by adjusting based on wear-rate levels for each system, at the end of the licensing period be considered to qualify the SCs in scope for the period of extended operation (PEO). The reduced cross-sectional properties coupled with the increased seismic estimates will increase the stress levels exponentially at the critical locations of SCs.

I suggest DLR should look into this closely! Based on the recent earthquake event in Virginia, the applicant will be developing new response spectra curves, starting from the measured ground elevations, and developing new ones for different elevations as well as for different damping values. If these the current safe shutdown earthquake (SEE) response spectra curves would not envelop the new response spectra curves, reevaluation of all SCs need to be performed for justification of continued operation (JCO) using the predicted cross-sectional properties en the end of the license period.

I worked at both sites, North Anna and Surry NPPs on their numerous modification packages – specifically, on the seismic qualification of systems during the post Three Mile Island incident.

Ata ISTAR

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