

**Roquecruz, Carla**

**From:** Kemper, William *WK*  
**Sent:** Friday, September 16, 2011 4:17 PM  
**To:** Stattel, Richard; Rahn, David  
**Cc:** Wilson, George; Carte, Norbert; Dittman, Bernard  
**Subject:** RE: North Anna Seismic Event--Questions Which Would need to be responded to and evaluated by the NRC HQ Staff

Rich,

It is my understanding that both units at North Anna were shut down automatically due to the effects of the seismic event. I agree with you, the transmitters have been seismically qualified and should function during a DBA or AOO to safely shutdown the plant—which did happen. However, I think a check of the calibration of remote transmitters (in particular) would be prudent, albeit it is conservative, since the plant was challenged by a seismic event that is close to its design basis. I am not concerned with other plants in the region that may have felt the shock wave of the earth quake because they are located a fair distance from the epicenter of the quake and the plants were not threatened by the seismic event. However, if say Calvert Cliffs tripped due the seismic event then I would be in favor of asking CEG to verify that the RPS and ESFAS is functional and properly calibrated before restating the plant.

These types of transients don't happen often in the US (thank goodness!), so in light of what is going on in the world right now regarding plant safety challenges due to natural phenomena, I am inclined to err on the conservative side and ensure that the licensee has done all that is possible to ensure the plant will operate safely after this significant seismic event. In my judgment, having North Anna perform calibration checks of the RPS and ESFAS in a graded approach manner would be a good step to ascertain that this seismic event did not damage the plant's emergency shutdown systems. However, in the final analysis, the Region will make the call....hope this is helpful.

Thanks,

*Bill*

Bill Kemper,  
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**From:** Stattel, Richard *NR*  
**Sent:** Friday, September 16, 2011 10:38 AM  
**To:** Rahn, David; Kemper, William  
**Cc:** Wilson, George; Carte, Norbert; Dittman, Bernard  
**Subject:** RE: North Anna Seismic Event--Questions Which Would need to be responded to and evaluated by the NRC HQ Staff

Bill, Dave,

I don't necessarily entirely agree with your recommendation. If the seismic limits for the sensing components have not been exceeded, then is there really reason to question the calibration integrity of these components? In some cases, like for Rosemount transmitters, there is a significant margin that could be considered.

I agree with the recommendation only if the licensee cannot show that these individual component limits have not been exceeded. Otherwise, we need to consider that there were also several other plants (Surry, Calvert)

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Cliffs) which shook during that same event. Why wouldn't we require those plants to go in and calibrate their sensors as well?

**Richard Stattel**

Sr. Electronics Engineer

US Nuclear Regulatory Commission

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**From:** Rahn, David *NRC*  
**Sent:** Thursday, September 15, 2011 1:06 PM  
**To:** Kemper, William  
**Cc:** Wilson, George; Stattel, Richard; Carte, Norbert; Dittman, Bernard  
**Subject:** RE: North Anna Seismic Event--Questions Which Would need to be responded to and evaluated by the NRC HQ Staff

Great idea—thanks!

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**From:** Kemper, William  
**Sent:** Thursday, September 15, 2011 1:05 PM  
**To:** Rahn, David  
**Cc:** Wilson, George; Stattel, Richard; Carte, Norbert  
**Subject:** RE: North Anna Seismic Event--Questions Which Would need to be responded to and evaluated by the NRC HQ Staff

Hi Dave,

I have been out of the office for a few days and just saw this message. My recommendation would be to have the licensee verify the RPS and ESFAS channel calibration is within acceptable limits, in addition to a functional checks. This would be equivalent to their refueling calibration surveillance, and perhaps they could satisfy this action by performing calibrations on at least two channels, and if necessary, based on the results of the channels calibrated, calibrate the other two channels of RPS and ESFAS—only if needed. Hope this helps.

Thanks,

*Bill*

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**From:** Rahn, David  
**Sent:** Tuesday, September 13, 2011 2:08 PM  
**To:** Alvarado, Rosnyev; Chung, Pong; Darbali, Samir; Dittman, Bernard; Mossman, Timothy; Singh, Gursharan; Stattel, Richard; Wyman, Stephen  
**Cc:** Carte, Norbert; Kemper, William; Wilson, George  
**Subject:** North Anna Seismic Event--Questions Which Would need to be responded to and evaluated by the NRC HQ Staff

Hi EIGB Team:

Per our conversation this morning at the branch meeting, please provide a list of questions you believe we would need to follow up on with the licensee from a long-term I&C Design standpoint in order to arrive at a reasonable assurance determination that it is OK to restart one of the units at North Anna. Please keep in mind that there is already an Augmented Inspection Team at North Anna site composed of personnel from our Region II Office, who are looking at issues related to the actions taken by the licensee immediately upon experiencing the earthquake. Also keep in mind that the Licensee has already informed us that they intend to perform functional testing of all Reactor Trip system and ESFAS system initiation channels prior to start-up.

In addition to understanding the earthquake's impact on IC equipment functionality, there are issues we discussed this morning pertaining to the operability of the seismic monitoring equipment, which need to be addressed.

From Meena Khanna's meeting announcement for a meeting to be held on Wednesday, Sept 14, 2011 from 1:30 pm until 2:00 pm.

"I request that all of you please try to attend this meeting, as we need to meet to address path forward with regards to this issue. I will bring a copy of the draft action plan and will lay out expectations, guidance, schedules, etc. Pls note that this is a **high priority** initiative, in that it involves plant restart. We are looking to issue questions starting this week, so I really would like for each branch, if not already done, to pls develop questions regarding short term (prior to plant restart) and long term (post restart) licensee's actions."

Thanks,

Dave

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