

From: Park, Sunwoo ^{NRO}
To: Franke, Mark; Kolcum, Gregory; Clagg, Rodney; Jackson, Rahsean; Suggs, LaDonna; Walker, Shakur; Li, Yong; Chakravorty, Manas
Subject: RE: Update from Dominion on N. Anna
Date: Thursday, September 08, 2011 12:22:41 PM

I wonder if analyses, along with inspections and tests, are an avenue that the licensee may take to demonstrate that the facility will continue to be operated in conformity with the CLB. It can be understood that the SSCs survived the DBE exceedance primarily due to safety margins inherent in their designs. Seismic structural analyses of safety-related SSCs using the measured earthquake intensities as the input may provide useful insight about the post-earthquake vulnerability of these SSCs. If appropriate, these analyses could be considered as licensee's long-term evaluation commitment upon restart.

-----Original Message-----

From: Chakravorty, Manas
Sent: Thursday, September 08, 2011 11:14 AM
To: Jackson, Rahsean; Suggs, LaDonna; Walker, Shakur; Franke, Mark; Kolcum, Gregory; Li, Yong; Clagg, Rodney; Park, Sunwoo
Subject: RE: Update from Dominion on N. Anna

I agree with the observations below. I think performance of the Category I structures during this earthquake was adequate. However, the condition still represents an unanalyzed event since it was not bounded by the NA DBE. It still remains to be seen as to what would be their approach for seismic reevaluation. As per the EPRI guidance, some of these reevaluation can be performed as a long-term evaluation upon restart if the damage level is not significant.

-----Original Message-----

From: Jackson, Rahsean
Sent: Thursday, September 08, 2011 10:59 AM
To: Suggs, LaDonna; Walker, Shakur; Franke, Mark; Kolcum, Gregory; Li, Yong; Chakravorty, Manas; Clagg, Rodney; Park, Sunwoo
Subject: RE: Update from Dominion on N. Anna

From a structural standpoint I didn't see anything too alarming that would make me think there were any issues with structural integrity. As a matter of fact, considering the magnitude of the event and the DBE assumed in the design all the seismic category I structures performed well. Like Young mentioned in his email, some form of NDE of critical structural components would provide some level of additional confidence. I am no experts electrically or mechanically but more than visual inspections of those systems would be expected.

-----Original Message-----

From: Suggs, LaDonna
Sent: Thursday, September 08, 2011 7:08 AM
To: Walker, Shakur; Franke, Mark; Kolcum, Gregory; Jackson, Rahsean; Li, Yong; Chakravorty, Manas; Clagg, Rodney; Park, Sunwoo
Subject: RE: Update from Dominion on N. Anna

I agree sentiments expressed particularly after discussions with some of the regional electrical experts, although the licensee has not detected any major fallout from the earthquake, visual inspections of the electrical systems would not be sufficient to declare them operable. There could very be some damage to relays or misalignment of electrical connections due to the vibrations that could go unnoticed until the equipment is energized and cycled. I would, at a minimum, expect them to do some sort of representative sampling to determine a percentage of testing to be conducting (if not 100% of safety related equipment) to give some confidence that the equipment is fully operable.

From: Walker, Shakur
Sent: Wednesday, September 07, 2011 10:54 PM

B/32

To: Franke, Mark; Kolcum, Gregory; Suggs, LaDonna; Jackson, Rahsean; Li, Yong; Chakravorty, Manas; Clagg, Rodney; Park, Sunwoo
Subject: RE: Update from Dominion on N. Anna

After perusing the EPRI docs, I didn't see references to Level 0 and Level 1, so I'm not 100% positive what the differences between the two are. There is some credibility to the plan perhaps with respect to structural inspection, but we should be aware what surveillance tests they are performing and for which systems. Also, I don't know if the licensee can make a confirmatory statement (yet) that the issues being discovered on the EDGs were not influenced or compounded by the earthquake. Perhaps this should be considered in determining if their use of the EPRI guidance is appropriate and whether or not the quake damaged safety-related equipment.

From: Franke, Mark
Sent: Wednesday, September 07, 2011 5:55 PM
To: Kolcum, Gregory; Suggs, LaDonna; Walker, Shakur; Jackson, Rahsean; Li, Yong; Chakravorty, Manas; Clagg, Rodney; Park, Sunwoo
Subject: Fw: Update from Dominion on N. Anna

Please see below and let me know your thoughts.

This email is being sent from an NRC mobile device.

From: Wert, Leonard
To: Franke, Mark
Sent: Wed Sep 07 17:44:29 2011
Subject: FW: Update from Dominion on N. Anna

Sorry, left you off this....

From: Wert, Leonard
Sent: Wednesday, September 07, 2011 5:09 PM
To: Jones, William; Leeds, Eric
Cc: McCree, Victor; Giitter, Joseph; Grobe, Jack; Boger, Bruce; McCoy, Gerald; Wilson, George; Kolcum, Gregory; Croteau, Rick; Virgilio, Martin
Subject: Update from Dominion on N. Anna

Dave Heacock just called regarding the status of actions at N. Anna and their preps for tomorrow's meeting. They are planning an extensive presentation and will have the seismic expertise on hand to answer our questions. Their experts, including those external to Dominion, have concluded that level 0 in the EPRI guidance is appropriate. They are on track to have all inspections completed Friday and surveillance testing is currently about 25% complete. They are inspecting /testing to level 1 per EPRI as a conservative measure. No problems identified to date. He also confirmed that they will be ready to address the seismic instrumentation and data collected as well as interpretation of that data. They are continuing to examine the cause of the actual reactor trip and are exploring several potential causes. He stated that pending no problems and if their scope is adequate, they expect to be complete with all testing and inspections and be ready to change modes as early as 9/22. If the discussions at the meeting support that as a reasonable schedule, we certainly need to consider that prominently in our plans.

Leonard Wert
Deputy Regional Administrator for Operations
Region II, USNRC

From: [Li, Yong](#)
To: [Franke, Mark](#); [Kolcum, Gregory](#); [Suggs, LaDonna](#); [Walker, Shakur](#); [Jackson, Rahsean](#); [Chakravorty, Manas](#); [Clagg, Rodney](#); [Park, Sunwoo](#)
Subject: RE: Update from Dominion on N. Anna
Date: Wednesday, September 07, 2011 10:51:05 PM

Mark,

What is the surveillance testing mentioned in the email? I hope it means non-destructive testing which can expose hidden damages.

Based on the evidence surfaced so far, I agree that the impact is very small to the facility. However, the seismic recordings at different elevation levels of the Unit 1 and Aux building indicate clearly that ground motion at those levels exceeded the corresponding design motions, not just OBE. Therefore, there could be some potential hidden damages which cannot be simply detected by the visual checking carried out during walkdowns. Should the license implement some level or per centage checking which can detect hidden damage before they can change modes (restart)? EPRI guidance on intensity level is subjective and is based on non-nuclear power plant damage situation. The mindset for NP6695 is targeting at those scenarios when OBE is exceeded.

Yong

From: Franke, Mark
Sent: Wednesday, September 07, 2011 5:55 PM
To: Kolcum, Gregory; Suggs, LaDonna; Walker, Shakur; Jackson, Rahsean; Li, Yong; Chakravorty, Manas; Clagg, Rodney; Park, Sunwoo
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