

From: Holston, William *WR*
 Sent: Wednesday, September 14, 2011 1:01 PM
 To: Auluck, Rajender
 Cc: Sheikh, Abdul; Yee, On; Medoff, James; Lehman, Bryce
 Subject: RE: Potential Questions for North Anna Restart

Item 1 is a good addition to the three bullets under the TLAA questions I sent you.

Item 2 – I think at this stage, without the answers to the initial set of questions we have already put together, this question may be too broad. They may very well come back and state that all analyses remained within allowable. I would think that we would ask Item 2 as a follow-on if the licensee tells us that allowable were exceeded.

Item 3 – Good question, although, I suspect that DCI will be submitting a very similar question because it applies much more in Part 50 space for now.

Item 4 – I think this question is a subset of questions 2 and 5.

I took the liberty of merging Abdul's questions with mine (using my comments for each item) and added numbering, so that we have a single compiled list of questions. I also incorporated Bryce's comment.

For all in-scope license renewal components, respond to the following:

1. For all TLAA's submitted with the License Renewal Application and it's amendments:
 - State whether the recent seismic activity has resulted in a change to the disposition of any TLAA such that the original conclusions do not remain the same.
 - For any dispositions that have changed, state how the TLAA is now dispositioned (i.e., 10 CFR 54.21(c)(1)(i), 10 CFR 54.21(c)(1)(ii), or 10 CFR 54.21(c)(1)(iii).
 - State the basis for the acceptability of the change in disposition. For example, if a disposition changed from 10 CFR 54.21(c)(1)(i) to 10 CFR 54.21(c)(1)(iii), state how the aging effects will be adequately managed throughout the period of extended operation.
 - According to the North Anna UFSAR Table 5.2-4, faulted conditions (Design Basis Earthquake) are not included in the fatigue analysis of the plant components and structures. In addition, OBE earthquakes are also not included in the fatigue analysis. Therefore, for all TLAA's submitted with License Renewal Application (LRA) and its amendments: provide revised fatigue analyses that include the impact of the August 2011 earthquake on the long term operation of the plant (40-60 years). These analyses should also include the impact of earthquake aftershocks, and consider five additional OBE level earthquakes that may occur until the end period of extended operation.
2. While the staff acknowledges that a seismic event is a near singular aging event, given that the recent seismic activity exceeded the current seismic licensing basis with multiple aftershocks, state how:
 - It was concluded that no existing flaws or defects sizes were impacted such that augmented license renewal inspections need not be conducted.
 - It was concluded that no new flaws or defects occurred such that augmented license renewal inspections need not be conducted.
3. The concrete containment, penetrations, isolation valves, and equipment/personnel hatches were subjected to beyond design basis seismic forces. Please describe the plans and schedule to perform the SIT, ILRT, ILLRT to demonstrate the ability of the containment to perform its intended function during the period of extended operation.

4. State what augmented license renewal inspections will be conducted at displacement sensitive locations (e.g., tank nozzle connections, piping transitioning between buildings or from a building to the soil, where differential seismic movements occur) to confirm that there was no impact to the pressure boundary function (i.e., PB) or structural and/or function support function (i.e., SNS, SS, SSR), or state the basis for why augmented inspections are not required for programs such as Tank Inspection Activities and Buried Piping and Valve Inspection Activities, or state the basis for why such inspections are not required.
5. State what augmented license renewal inspections will be conducted for structures and piping/component supports to ensure that seismic displacements did not result in significant cracking for concrete and masonry walls, or loss of form for soil, or state the basis for why such inspections are not required.
6. LRA Section B2.2.2, Battery Rack Inspections program states that, "A seismic event would be the limiting condition for battery support rack Integrity." It also states that the program conducts visual inspections. Given that the recent seismic activity exceeded the current seismic licensing basis, state whether augmented surface or volumetric inspections will be conducted to ensure that the battery racks are capable of performing their CLB function. If augmented inspections will not be performed, state the basis why these inspections are not required.

From: Auluck, Rajender *NRK*
Sent: Wednesday, September 14, 2011 12:44 PM
To: Holston, William
Subject: FW: Potential Questions for North Anna Restart

Bill,
FYI and comments.

raj

From: Sheikh, Abdul *NRK*
Sent: Wednesday, September 14, 2011 11:34 AM
To: Auluck, Rajender
Cc: Istar, Ata
Subject: Potential Questions for North Anna Restart

I have used the information provided by different individuals and developed the following broad questions that are relevant for license renewal. North Anna Units 1 and 2 period of extended operation in 2018 and 2020 respectively.

Item No. 1

According to the North Anna UFSAR Table 5.2-4, faulted conditions (Design Basis Earthquake) are not included in the fatigue analysis of the plant components and structures. In addition, OBE earthquakes are also not included in the fatigue analysis. Therefore, for all TLAA's submitted with License Renewal Application (LRA) and its amendments:

Provide revised fatigue analyses that include the impact of the August 2011 earthquake on the long term operation of the plant (40-60 years). These analyses should also include the impact of earthquake aftershocks, and consider five additional OBE level earthquakes that may occur until the end period of extended operation.

Item No. 2

August 2011 earthquake magnitude exceeded the current seismic licensing design basis with multiple aftershocks. Please describe the impact of this event on the different aging management programs. Specifically, describe the changes to all the aging management programs to incorporate the new operating experience due to the August 2011 earthquake. This should as a minimum include plans for augmented immediate and follow up inspections of the structures, piping, supports, penetrations, tanks, buried piping, electrical conduits, battery racks, and tanks.

Item No. 3

The concrete containment, penetrations, isolation valves, and equipment/personnel hatches were subjected to beyond design basis seismic forces. Please describe the plans and schedule to perform the SIT, ILRT, ILLRT to demonstrate the ability of the containment to perform its intended function during the period of extended operation.

Item No. 4

August 2011 earthquake magnitude exceeded the current seismic licensing design basis. Therefore, stresses in structures, components, supports, and piping may have exceeded the yield strength of the materials and may have caused cracking or deformations not originally considered in the design. Please describe how the impact of these effects will be monitored/managed over the long term during the period of extended operation.