

NRR-PMDAPEm Resource

From: Ptasznik, Elizabeth M [EPtasznik@ameren.com]
Sent: Wednesday, June 24, 2015 11:19 AM
To: Wyman, Stephen
Cc: Devlin-Gill, Stephanie; Maglio, Scott A; Elwood, Thomas B; Patterson, John T; Huhmann, Bruce E; Stepanovic, Daniel M; Hollabaugh, David S; Belchik, George N; Cunningham, James L
Subject: [External_Sender] Callaway ESEP Clarifications Questions

Stephen,

In our 6/3/15 email response, Callaway Plant provided the following response to question 2.c: "Containment pressure instrumentation was not included at the time of the ESEP as the containment function was not expected to be challenged per the OIP. Further investigation of the need for inclusion of containment pressure instrumentation on the ESEL is needed."

After further investigation, Callaway has concluded the following:

In the process of screening containment pressure instrumentation, three determinations were made:

- 1) the containment function was not expected to be challenged per the still-in-progress OIP (Reference 1, Pages G-46, G-48, and G-50)
- 2) there was no credible mechanism to damage containment pressure transmitters
- 3) the guidance allows the exclusion of structures (e.g. containment, auxiliary building, etc.)

In addition, there are no block walls inside containment and small-bore tubing has adequate flexibility to withstand a seismic event. Based on this information, containment pressure instrumentation was not initially included on the ESEL. After further consideration, given that the Overall Integrated Plan (OIP) lists Containment Pressure as a Key Containment Parameter credited or recovered to maintain containment in Phases 1, 2 and 3, Callaway will add containment pressure instrumentation to the ESEL and apply the ESEP. Given the time required to perform the requisite walkdowns and analyses, and competing resources that are in use for the SPRA for Callaway (a Group 1 plant), we plan to complete the ESEP on containment pressure instrumentation by December 31, 2015. (Reference 1: TR-FSE-13-4, Rev. 0, "Callaway Plant FLEX Integrated Plan.")

A complete response to each of the 4 questions in your May 19th, 2015 email has been provided. Please let us know if further discussion is required.

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ELIZABETH PTASZNIK
Engineer
Regulatory Affairs - Licensing
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Please consider the environment before printing this e-mail.

From: Ptasznik, Elizabeth M
Sent: Wednesday, June 03, 2015 5:28 PM
To: 'Wyman, Stephen'
Cc: Maglio, Scott A; Devlin-Gill, Stephanie; Elwood, Thomas B; Patterson, John T; Huhmann, Bruce E; Stepanovic, Daniel M; Hollabaugh, David S; Belchik, George N; Cunningham, James L
Subject: RE: Callaway ESEP Clarifications Questions

Stephen,

A response to each of your questions are provided for the Callaway Plant below. We are asking for an extension on our response to Question 2.c until 06/25/2015.

1. The components in question were not included on the ESEL because of the exemption “NSSS Components” contained in the Augmented Approach Guidelines (Reference 1, Section 3.2). Without further definition provided, those components considered to be part of the Nuclear Steam Supply System (NSSS) were designated as the Reactor Coolant System (RCS) and connected systems up to the main steam isolation valves (MSIVs). Therefore, the components questioned, steam generator atmospheric relief valves (ARVs), accumulators, accumulator isolation valves, and reactor head vent and pressurizer PORV were not included on the Callaway Expedited Seismic Evaluation List (ESEL). (Reference 1: EPRI Report, “Seismic Evaluation Guidance Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic”)
2. Steam generator water level, steam generator pressure, RCS pressure and RCS temperature were not included on the ESEL because of the exemption “NSSS Components” contained in the Augmented Approach Guidelines (Reference 1, Section 3.2). Without further definition provided, those components considered to be part of the Nuclear Steam Supply System (NSSS) were designated as the Reactor Coolant System (RCS) and connected systems up to the main steam isolation valves (MSIVs). Therefore, steam generator water level, steam generator pressure, RCS pressure and RCS temperature were not included on the Callaway Expedited Seismic Evaluation List (ESEL). Containment pressure instrumentation was not included at the time of the ESEP as the containment function was not expected to be challenged per the OIP. Further investigation of the need for inclusion of containment pressure instrumentation on the ESEL is needed. (Reference 1: EPRI Report, “Seismic Evaluation Guidance Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic”)
3. The new flow path will rely on the HCST. For surface-mounted structures, systems and components (SSC), directly applying the GMRS for HCLPF determination is acceptable. Thus the RLGM for the HCST is the GMRS. The HCST, when constructed, will achieve a HCLPF capacity at the level of the RLGM. Connected piping and pipe supports screen out of ESEP and will be designed to SSE. Per the current design, a new fail-open AOV will be installed between the HCST and the existing AFW system. This valve will be seismically analyzed to meet ESEP requirements.
4. The walkdowns were performed by structural engineers that were designated as Seismic Capability Engineers (SCE). Required for that designation, they have all completed the EPRI 5-day SQUG training. These engineers were also the same engineers that performed the NTTF 2.3 Seismic Walkdowns for this plant (their certificates were included in the 2.3 NRC submittals.)

If there is a need for further discussion, please contact me, and we can arrange a phone call with Callaway's project team.

Liz

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ELIZABETH PTASZNIK
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Please consider the environment before printing this e-mail.

From: Wyman, Stephen [<mailto:Stephen.Wyman@nrc.gov>]
Sent: Tuesday, May 19, 2015 3:30 PM
To: Elwood, Thomas B; Ptasznik, Elizabeth M
Cc: Maglio, Scott A; Devlin-Gill, Stephanie
Subject: Callaway ESEP Clarifications Questions

Mr. Elwood,

In follow-up to our phone conversation today, as part of the NRC review of the Callaway ESEP report, the staff would appreciate clarification on the following technical items:

The following clarification questions are raised in the context of the NRC evaluation of the ESEP submittals only and licensees' responses will be reviewed by NRC staff only to the extent the use of this information affects the elements and outcomes of the ESEP evaluation. As many licensees have used information from their ongoing SPRA analyses, the current review will not evaluate methods or results as they pertain to the SPRA. They will be reviewed later at the time of SPRA review.

- 1) The following SSCs appear to meet the ESEP guidance, but were not included on the ESEL: steam generator atmospheric relief valves (ARVs), accumulators, accumulator isolation valves, and reactor head vent or pressurizer PORV. Please add these components to the ESEL with any associated support equipment and provide results per ESEP guidance (e.g., HCLPF analysis results) or provide a justification why they are not included on the ESEL.
- 2) All necessary instrumentation does not appear to be included on the ESEL. Clarify which SSCs are necessary to achieve the following indications and confirm they are included in or added to the ESEL.
 - a. Steam generator water level
 - b. Steam generator pressure
 - c. Containment pressure
 - d. RCS pressure
 - e. RCS Temperature
- 3) The hardened CST (HCST) was not included in the ESEL. Confirm whether the new flow path will rely on the HCST and if so, whether the HCST when constructed will achieve a HCLPF capacity at the level of the RLGM. If the new flow path will rely on support equipment which falls within the scope of the ESEP, such as permanently installed equipment or FLEX connection points, confirm that these SSCs will achieve a HCLPF capacity at the level of the RLGM.

- 4) The licensee did not state whether the walkdown personnel were trained in seismic walkdown. Please confirm that the walkdowns were conducted by trained personnel that successfully completed training specific for seismic, such as the Seismic Qualification Utility Group (SQUG) Walkdown Screening and Seismic Evaluation Training Course.

An email response will likely be sufficient to support the ESEP report review, however, please be aware that your email response will be made publicly available in ADAMS. A response around June 3rd, if practicable, would be greatly appreciated to support the planned review schedule.

Please let me or Nick DiFrancesco (at 301-415-1115) know if you would like to schedule a clarification call or have any questions and concerns.

Thanks,
Steve

Stephen M. Wyman

USNRC/NRR/JLD/HMB

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