

From: [Miller, Ed](#)
To: [Mitchell, Matthew](#)
Subject: Questions for Siesmic Public Meeting
Date: Tuesday, October 29, 2013 1:03:00 PM
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Matt,

These are the questions on the seismic walkdowns (R2.3) to be discussed at the October, 2013, public conference call. Please let me know if you have any comments or questions. Thanks.

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NRC Questions

On March 12, 2012, the Nuclear Regulatory Commission (NRC) staff issued a letter requesting additional information per Title 10 to the *Code of Federal Regulations*, Section 50.54(f) (hereafter called the 50.54(f) letter). The letter requested licensees conduct seismic hazard walkdowns to verify the plant configuration with the current licensing basis (CLB). The licensees stated by letter that the seismic walkdowns would be performed in accordance EPRI-1025286, "Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic" (walkdown guidance). Following the staff's initial review of the walkdown reports, regulatory site audits were conducted at a sampling of plants. Based on the walkdown report reviews and site audits, the NRC staff identified the following additional information necessary to allow the staff to complete its assessments

1. Conduct of the walkdowns, determination of potentially adverse seismic conditions (PASCs), dispositioning of issues, and reporting

As a result of the audits and walkdown report reviews, the staff noted that licensees' interpretations of the seismic walkdown guidance varied, which resulted in meaningful differences in the process used to disposition identified issues and in the documentation that was provided to the NRC staff. In particular, the application of engineering judgment in determining what constituted a potentially adverse seismic condition (PASC); the threshold for conducting licensing basis evaluations (LBEs); and determining what information was to be reported to the NRC staff varied.

The staff intended that conditions initially marked No (N) or Unknown (U) in the field by the seismic walkdown engineers (SWEs) for which an analysis or calculation was performed would be considered as PASCs and that an analysis or calculation constituted a LBE. The walkdown guidance allows for analysis as part of engineering judgment; however, the intent was to allow for only simple analyses that could be readily performed in support of engineering judgment. Further, the walkdown activities were intended to allow for transparency in the licensee's process to demonstrate that PASCs were appropriately identified, that they were addressed in an appropriate manner and the basis documented such that the current condition of the plant was clearly consistent with the CLB with regards to seismic capability.

During the audits, the staff identified examples of field observations that were deemed not to be PASCs. However, the basis for the determination was not clearly recorded. In some cases, the field checklists were amplified by noting that the basis was engineering judgment. During site audit discussions, the staff was able to trace the basis for the engineering judgments and found that many cases they were appropriate. It is expected that these situations would not be included in the walkdown report.

There were other situations that a PASC and LBE were not reported; however it was found during the audit that a calculation, analysis (more than just simple) or evaluation was conducted but informally. An example is a confirmatory calculation performed to demonstrate that six anchor bolts out of eight was not a seismically adverse condition. Another example would be an analysis to demonstrate that an existing, slightly short weld was as seismically sound as the

prescribed weld length in the plant design documentation. The staff expected these types of conditions and evaluations to be captured in the licensee's normal plant processes (e.g., condition report or corrective action program), and also reported in the walkdown report, since they were potentially adverse seismic conditions that required more than applying judgment or simple analysis to address.

The staff also found that the process that was used to deal with a field observation that was deemed to be a PASC was also not completely described or captured in the report. In many cases, the licensee reported that a LBE was not performed. However, during the audits it was clear that a LBE (or an equivalent determination method) was performed and used in determining whether a PASC should be entered into the CAP. The staff expects that these conditions would be reported in the walkdown report.

On the whole, through the audits the staff found that it was able to conclude that the intent of the guidance was met when the licensee's overall process was completely explained, the information was updated to reflect the actual process and results were updated. The self-assessments conducted by the licensees of the audited plants also identified the lapse in the description of the process used by the licensee to identify a PASC and disposition it.

Therefore, in order to clarify the process that was followed, provide a description of the overall process used by the licensee (and its contractors) to evaluate observations identified in the field by the SWEs. The process should include how a field observation was determined to be a PASC or not and how the bases for determinations were recorded. Once a determination was made that an observation was a PASC, describe the process for creating a condition report (or other tracking mechanism), performing the licensing basis evaluation (or other determination method), and the resultant action, such as entering it into the corrective action program (CAP) or documenting the result and basis.

Also, in order to confirm that the reported information supports concluding that the plant meets the CLB please follow one of the following three acceptable alternatives:

1. Provide a supplement to the table or text from the original walkdown report, if needed, to include similar conditions as the above examples and situations and for conditions for which a calculation, analysis (if more than a simple analysis), or evaluation was used for a determination. The table should include a short description of each condition, how it was dispositioned and the basis for the disposition, as follows: 1) for each condition that was entered into the CAP, provide the CAP reference number, initiation date, and (if known) the planned completion date, or 2) for all other conditions, provide the result of the licensing basis evaluation (or other determination method), the basis for the result, and how (or where) the result was captured in the plant's documentation or existing plant process.
2. Following the plant's standard procedures, confirm that a new CAP or CR entry has been made to verify if appropriate actions were taken when reporting and dispositioning identified PASCs (including conditions for which a calculation, analysis (if more than a simple analysis), or evaluation was used for a determination). The eventual CAP closeout, including the process followed and actions taken, should be in sufficient detail to enable NRC resident inspectors to follow up.

3. If no new conditions are identified for addition to the table or the CAP entry mentioned above is deemed not necessary, provide a statement of confirmation that all potentially seismic adverse conditions (including conditions for which a calculation, analysis (if more than a simple analysis), or evaluation was used for a determination) identified during the walkdowns and walk-bys were addressed and included in the report to the NRC.

2. Conduct of the Peer Review Process

As a result of the walkdown report reviews, the staff noted that some descriptions of the peer reviewers and the peer review process that was followed were varied and in some cases unclear. In some cases, the staff could not confirm details of the process, such as if the entire process was reviewed by the peer review team, who were the peer reviewers, what was the role of each peer reviewer, and how the reviews affected the work, if at all, described in the walkdown guidance.

Therefore, in order to clarify the peer review process that was actually used, confirm whether the following information on the peer review process was provided in the original submittal, and if not provide the following.

1. Confirmation that the activities described in the EPRI guidance on page 6-1 were assessed as part of the peer review process,
2. A complete summary of the Peer review process and activities. Details should include confirmation that the personnel part of the Peer review team were not involved in other seismic walkdown-related activities (e.g., participated in the selection of the systems, structures and components on the seismic walkdown equipment list). If there were cases in which Peer reviewers reviewed their own work, please justify how this is in accordance with the objectives of the Peer review efforts.

Also, if there are differences from the original submittal, provide a description of the above information. If there are differences in the review areas or the manner in which the peer reviews were conducted, describe the actual process that was used.