

From: [Bamford, Peter](#)
To: ["Todd, Laura Frances"](#)
Cc: [Grzeck, Lee \(Lee.Grzeck@duke-energy.com\)](#)
Subject: Oconee SPRA Document Requests and Initial Questions
Date: Monday, February 25, 2019 1:53:00 PM

Laura, I promised that I would get back to you after we have completed the initial completeness review of the Oconee SPRA submittal. We have performed the initial review, and the NRC is satisfied that the submittal appears to be responsive to the 50.54(f) request. Thus, we are now proceeding to the detailed review phase. In order to perform the detailed review, we are requesting the following information to be placed on the ePortal:

1. In order to evaluate SPRA Review Checklist Topics #4 and #7, the staff requests to review the applicable structural model documentation demonstrating the soil structure interaction (SSI) and development of in-structure response spectra (ISRS) for one building listed in Table 4-2 of the Oconee SPRA submittal. The staff believes that portions of References 20 and 21 from the Oconee SPRA submittal may contain this information. If so, please post those two references on the ePortal, and identify the applicable sections.
2. In order to evaluate SPRA Review Checklist Topic #5, please post on the ePortal documentation for the soil properties applicable to the West Penetration Room (fixed based analysis).
3. The staff notes that the licensee has used representative fragilities for initial quantification and refined the fragilities using conservative deterministic failure model (CDFM) and separation of variables (SOV) methodologies for dominant risk contributors. In order to evaluate SPRA Review Checklist Topics #9 and #12, the staff requests that documentation illustrating the application of the fragility approaches be posted on the ePortal. The staff believes that portions of References 22 and 23 from the Oconee SPRA submittal may contain this information. If so, please post those two references on the ePortal, and identify the applicable sections.
4. In order to evaluate SPRA Review Checklist Topic #12, the staff requests that the applicable documentation for the development of structural fragility of the Reactor Building, or any other building that was analyzed for the SPRA submittal, be posted on the ePortal.
5. In order to evaluate Checklist Topic #12 and finding and observation (F&O) 23-3, the staff requests that documentation showing the development of representative fragility of: (i) RC-PUMP (1SF-PU-RCP, Table 5.4.2 and 5.5.2), and (ii) Small LOCA fragility (SF-SLOCA, Table 5.4.2 and 5.5.2) be posted on the ePortal. In addition, please include the structural analysis of the building where these components are located so that the staff can assess the process for development of the ISRS. This is needed for the evaluation of Checklist Topics #4, #7 and #12, so that the capacity and demand can be reviewed along with adequacy of structural modeling.
6. In order to evaluate Checklist Topic Checklist Topics #10 and #12, the staff requests that documentation showing the evaluation of fragility using the SOV approach for: (1) anchorage failure mode for Main Control Board (1SF-BD-MCRBOARD) and (2) functional failure mode of Relay Chatter (SF-RC-28) be posted on the ePortal. In addition, please include the structural analysis of the building where these components are located so that the staff can assess the process for development of the ISRS. This is needed for the evaluation of Checklist Topics #4, #7 and #12, so that the capacity and demand can be reviewed along with adequacy of structural modeling.

7. Please post documentation that supports resolution of F&Os 22-2 (SSI effects between buildings) and 22-4 (lead unit representation for Blockhouse buildings) on the ePortal.
8. Please post SPRA Peer Review Reports (Full-Scope, Focused-Scope, and Close-Out, as applicable)
9. Please post SPRA Human Reliability Analysis Notebook
10. Please post SPRA Plant Response Notebook
11. Please post Station Calculation for the - SPRA Quantification Notebook (Oconee SPRA Submittal, Reference 12)
12. Please post Station Calculation for the - PRA Modeling Notebook (Oconee SPRA Submittal, Reference 50)
13. Please post Station Calculation for the – Seismic-Induced Fire and Flood Assessment (Oconee SPRA Submittal, Reference 59)
14. Please post Station Calculation for the – Uncertainty and Sensitivity (Oconee SPRA Submittal, Reference 61)
15. Please post Internal Events PRA Peer Review Report (Full-Scope, Focused-Scope, and Close-Out, as applicable)

In addition to the ePortal document requests, we would like you to provide a response to the following:

1. Please confirm that the Oconee SPRA model incorporates the latest resolutions to all Internal Events PRA peer review finding level F&Os (open as well as closed). For any exclusion of those resolutions from the SPRA, as well as any dispositions of open findings, please provide a justification of why they do not impact the SPRA.

If any of these requests require clarification, please let me know.

Thank you.

Peter Bamford
Senior Project Manager
Nuclear Regulatory Commission (NRR/DLP/PBMB)
(301)415-2833