

## NRR-PMDAPEm Resource

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**From:** Lingam, Siva  
**Sent:** Friday, October 17, 2014 5:00 PM  
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**Cc:** Quichocho, Jessie; Poole, Justin; LaVie, Steve; Sullivan, Randy  
**Subject:** Watts Bar, Unit 2 - Request for Additional Information (RAIs) on EP Chapter 13.3 and Staffing Analysis

Please note the following official RAIs on Chapter 13.3 and emergency response organization on-shift staffing analysis report. Please provide your responses within 30 days from October 20, 2014.

27. The staff has reviewed the TVA protective action recommendation flow chart provided in Figures 10-1 and 10-2 of the Generic REP. Supplement 3 to NUREG-0654 "Guidance for Protective Action Strategies" provides guidance for alerting the EPZ population not addressed by the licensee protective action recommendation. The suggested method is to alert the non-affected population to "monitor and prepare." Further, the guidance is that automatic "sheltering in place" of the non-affected population is not constructive as it would prevent activities supportive of evacuation should that become necessary. The NRC staff was not able to identify any protective action recommendation for the non-affected population from the documents provided. Please explain how the protective action strategy addresses recommended actions for the population not affected by the initial evacuation or shelter-in-place protective action recommendation.
28. The NRC staff has reviewed the September 9, 2014 WBN Emergency Response Organization On-shift Staffing Analysis Report. The staff is requesting additional information to complete the review.
- a. It appears that the ECLs in the event table in Section 3.3 and used in the staffing analysis may not be based on the more limiting EAL in three cases:
- In Section 3.4.2.2, the MSLB dose in the summary is given as 0.104 rem TEDE and 3.2 rem thyroid CDE, which exceeds the SAE threshold for EAL 7.1, while the table identifies the ECL as an NOUE.
  - In Section 3.4.2.3, the SGTR dose in the summary is given as 0.35 rem TEDE and 13.3 rem thyroid CDE, which exceeds the GE threshold for EAL 7.1, while the table identifies the ECL as an Alert.
  - In Section 3.4.2.4, the FHA dose in the summary is given as 2.834 rem TEDE, which exceeds the EPA PAG and the General Emergency threshold for EAL 7.1. Yet the table in Section 3.3 states that the ECL is an Alert.
- It appears from Attachment 2 tables that the likely outcome of escalating the ECL would be to require personal accountability in the three cases, and the generation of a PAR in the SGTR and FHA cases. Please provide a justification for using the ECLs selected when a more restrictive ECL was applicable.
- b. In Attachment 2, all of the Table 1 on-shift positions refer to "REP App D Figure A-2." The staff hasn't located this particular reference in the materials TVA has submitted on the WBN-2 docket. This appendix was not identified in the list of references in the staffing analysis nor is it identified in Section 16.3 of the Generic REP R104X. Should this reference been "REP App C Figure 1-C?" Please advise.

- c. In Attachment 2, all of the Table 1 on-shift positions include a reference to Work Control Supervisor. Please confirm that this position is the Incident Commander identified in REP App C Figure 1-C as minimum on-shift staff.
- d. In the event specific information discussions there appears to be a difference between the information shown and the information in Amendment 105 (dated 2014) of the WBN FSAR. For example:
- The list of references in the staffing analysis indicates that WBN FSAR Section 15, Amendment 11 was used. TVA has submitted FSAR amendment 105 to the NRC. The list of the revised pages in the submitted FSAR indicates that all of the Chapter 15 pages were revised by Amendment 105.
  - Each DBA event summary provides the calculated two-hour site boundary doses for the event. All of these are reported in terms of rem TEDE and rem CDE Thyroid. However, the tables in Section 15.5 of the FSAR (Amendment 105) report the doses as “gamma”, “beta,” and “inhalation.” The reported doses, while close in value, are not consistent with values reported in the staffing analysis.
  - Section 3.4.2.2, MSLB, the scenario events indicate that a guillotine line break of one main steam line outside containment occurs upstream of the MSIV. However, it is then stated that after the MSIVs close in 8 seconds depressurization stops, which doesn’t appear to be consistent with the assumption of a break between the containment wall and the MSIV in that line.
  - Section 3.4.2.3, SGTR, states that the failed PORV is assumed to be isolated in 11 minutes. However, Table 15.5-16 states that the release from the faulted SG is 96,100 LBM for 30 minutes.
  - Section 3.4.2.4, FHA, is identified as occurring in the spent fuel pit/auxiliary building with no building isolation and with unfiltered releases through the auxiliary building vent. Contrary to that, the staffing analysis scenario events assume that ventilation system is isolated and the emergency mode of the ABGTS is started. Table 15.5-20 of the FSAR also states that iodine removal from the ABGTS and RBPVS was assumed. This case and the associated doses do not appear to match the cases reported in FSAR Amendment 105 table 15.5-23.

The staff’s objective here is not to challenge the assumptions in the FSAR, but rather (1) understand why there are apparent differences between the FSAR and the staffing analysis that references the FSAR and (2) what impacts the differences have on the staffing analysis. Please provide an explanation of these apparent discrepancies and explain why they do not impact the staffing analysis.

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