

Burkhardt, Janet

From: Lyon, Fred
Sent: Tuesday, January 22, 2013 6:45 AM
To: Wink, Roger C; 'Elwood, Thomas B'
Cc: Robinson, Jay; Iqbal, Naeem; Clemons-Webb, Candace; Pedersen, Roger
Subject: Callaway Revised RAI Questions for NFPA-805 (TAC No. ME7046)

Based on our phoncon with you on 1/15/13, below are the revised PRA RAI 35 and FM RAI 03.01b from our RAI letter dated 12/11/12 (ADAMS Accession No. ML12335A232). Please reference this email in your RAI response. For your information, PRA RAI 35 is a little different than the one written for D.C. Cook, due to their review schedule. There are future RAIs planned for this issue for other plants, and the staff intends to write them similar to yours.

In addition, the due date for your RAI response is extended to 2/19/13.

Thanks, Fred

Probabilistic Risk Assessment RAI 35

The April 17, 2012, response to PRA RAI 07b (ADAMS Accession No. ML12108A239, ML12108A240), justifies the use of a CCDP of 0.1 and CLERP of 0.01 for alternate shutdown where this failure probability represents both failures of equipment and operator actions. The justification for these CCDP and CLERP values is based on a qualitative feasibility assessment of the operator actions, which consists of a qualitative argument that the actions have been determined to be feasible. It may be acceptable to take the position that operator actions are dominant in the CCDP and CLERP. However, no quantitative assessment of CCDP and CLERP was provided to verify the CCDP of 0.1 and CLERP of 0.01 given that operator actions dominate. Despite feasibility considerations being addressed, it is not obvious that a CCDP value of 0.1 (and CLERP = 0.01) represents the failure probability of an action of this complexity. Provide further justification for the 0.1 and 0.01 by providing the results of the human failure event (HFE) quantification process described in Section 5 of NUREG-1921, considering the following

1. The results of the feasibility assessment of the operator action(s) associated with the HFEs, specifically addressing each of the criteria discussed in Section 4.3 of NUREG-1921.
2. The results of the process in Section 5.2.7 of NUREG-1921 for assigning scoping human error probabilities (HEPs) to actions associated with switchover of control to an alternate shutdown location. The bases for the answers to each of the questions asked in Figure 5-4 should be addressed.
3. The results of the process in Sections 5.2.8 of NUREG-1921 for assigning scoping human error probabilities (HEPs) to actions for performing alternate shutdown once switchover is complete. The bases for the answers to each of the questions asked in Figure 5.5 should be addressed
4. The results of a detailed HRA quantification, per Section 5.3 of NUREG-1921 in place of items 2 and 3 if a CCDP as low as 0.1 (and CLERP as low as 0.01) is not attainable through the scoping approach. For the detailed study, quantify the contribution via the evaluation of different scenarios upon MCR evacuation, including the sum of those scenarios in the results for the CCDP and CLERP.

Provide a sensitivity analysis that shows the impact on the PRA results (CDF, LERF, Δ CDF, Δ LERF) of using the resultant CCDP/CLERP analysis for control room abandonment scenarios.

Fire Modeling RAI 03.01

- b. Based on the staff's independent calculations, it appears that the plume radius for scenario C-31.3618-8 has been overestimated. This is likely to be the case for all other scenarios. Confirm that the use of the plume radii estimates do not have an adverse effect on the results of the risk calculations.