

From: Paige, Jason
Sent: Tuesday, November 10, 2009 10:41 AM
To: Czaya, Paul
Cc: Olga_Hanek@fpl.com
Subject: Request for Additional Information RE Boraflex Remedy Implementation Extension Request (Unit 4)

Paul, below are additional RAIs that the staff generated. If you have any questions regarding the below RAIs, please feel free to contact me and I can proceed with setting up a teleconference.

1. By letter dated July 27, 2001, the NRC staff concluded that the Westinghouse methodology of WCAP-14416 could no longer be referenced as "approved methodology" by the NRC staff or the licensees. In its letter, the NRC stated that, "[f]or future licensing actions, licensees will need to submit plant-specific criticality calculations for spent fuel pool configurations that include technically supported margins." In order for the staff to find reasonable assurance that Turkey Point Unit 4 fuel storage will comply with the regulatory limit of k_{eff} less than 1.0 under unborated conditions, please address the following additional questions.

- a. NSAL-00-015 states that, "typical range of values of the non-conservatism is 0 to 0.03000 delta-K." Please describe the method you used to determine the Turkey Point penalty of 0.01665 and explain how the penalty is conservative for Turkey Point.
- b. Please provide the boron letdown curve that was credited for the Turkey Point NSAL-00-015 analysis. Please demonstrate that the credited curve bounds those curves from the recent past cycles and future cycles.
- c. Please list the isotopes that you credited prior to applying the "Samarium and fission product buildup credit." What other fission product isotopes are credited under the "Samarium and fission product buildup credit?"
- d. Please provide the uncertainties and biases "rackup" determined in the Turkey Point NSAL-00-015 analysis for both Region I and Region II.

2. In the letter dated October 28, 2009, you provide that for Unit 4, the projected Boraflex degradation on 9/30/2012 for Region I and Region II is 19% and 8% respectively. During a call with the licensee, the staff was informed that for Unit 3, the projected Boraflex degradation on 9/30/2012 for Region I and Region II is 68% and 64% respectively. The staff also understands that Unit 4 projection has not been benchmarked by measurements. To allow the staff to determine the level of confidence on the Unit 4 predictions and to understand the large difference between the two units, please provide the following additional information:

- a. Please provide the "measured to predicted" comparison for the maximum degradation for Unit 3 based on measurements conducted in 2001, 2004, and 2007.
- b. Was RACKLIFE recalibrated after each measurement campaign (i.e., 2001, 2004, 2007) to perform the subsequent predictions?

- c. Please explain how the bulk pool silica measurement properly reflects the predicted maximum Boraflex degradation. Please address the impact of silica being trapped in the “tab” of the Unit 4 racks on the fidelity of the silica measurement as a correlation for Boraflex degradation (i.e., if silica content in the SFP water is an indication of neutron absorber degradation how is the trapped silica measured or accounted for as an indicator of neutron absorber degradation in Unit 4?).
- d. Please describe the factors causing the large differences in predicted Boraflex degradation between the Unit 3 and Unit 4.

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Subject: Request for Additional Information RE Boraflex Remedy Implementation
Extension Request (Unit 4)
Sent Date: 11/10/2009 10:33:45 AM
Received Date: 11/10/2009 10:41:00 AM
From: Paige, Jason

Created By: Jason.Paige@nrc.gov

Recipients:
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Tracking Status: None
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Post Office:

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MESSAGE	13087	11/10/2009

Options
Expiration Date:
Priority: olImportanceNormal
ReplyRequested: False
Return Notification: False

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Recipients received: