NRR-PMDA-ECapture Resource

From: Sreenivas, V
Sent: Friday, October 12, 2012 9:46 AM
To: tom.shaub@dom.com; david.heacock@dom.com
Cc: Pascarelli, Robert; Parks, Benjamin; 'Gary D Miller'
Subject: REQUEST FOR ADDITIONAL INFORMATION (RAI): NORTH ANNA POWER STATION UNITS 1 AND 2 -30-DAY REPORT REGARDING THERMAL CONDUCTIVITY DEGRADATION IN THE WESTINGHOUSE FURNISHED REALISTIC EMERGENCY CORE COOLING EVALUATION (TAC NOS. ME8727 AND ME8728)

NORTH ANNA POWER STATION UNITS 1 AND 2 -30-DAY REPORT REGARDING THERMAL CONDUCTIVITY DEGRADATION IN THE WESTINGHOUSE FURNISHED REALISTIC EMERGENCY CORE COOLING EVALUATION (TAC NOS. ME8727 AND ME8728)

By letter dated May 16, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12143A149), Virginia Electric and Power Company (Dominion, the licensee), submitted a report pursuant to Title 10 Code of Federal Regulations (10 CFR) 50.46 related to the estimated effect on peak cladding temperature resulting from thermal conductivity degradation in the Westinghouse furnished realistic emergency core cooling evaluation. In the course of the Reactor Systems Branch 10 CFR 50.46 report review, the staff determined that additional information is necessary to complete its review.

REQUEST FOR ADDITIONAL INFORMATION (RAI):

1. Attachment 2 to the May 16, 2012, Emergency Core Cooling System (ECCS) Evaluation Model Change Report states that large run sets were performed to stabilize the estimate of the PCT results. Please provide the following run set data concerning the North Anna ECCS Evaluation that the NRC approved by letter dated February 29, 2012, and the currently reported estimate of the North Anna ECCS evaluation results:

a. Run number
b. Values of statistically sampled input parameters, including first and second cycle burnup values as appropriate
c. Predicted peak cladding temperature
d. Predicted time of peak cladding temperature
e. Maximum local cladding oxidation

2. A method to estimate the effects of thermal conductivity degradation has been reported to the NRC as a correction for an ECCS evaluation model error. This method is described in a letter transmitted from Westinghouse to the NRC, dated March 7, 2012 (ADAMS Accession Number ML12072A035). This letter describes changes to the fuel performance modeling used to determine the fuel initial stored energy at the time of the hypothetical loss of coolant accident. Please explain whether this or a similar approach was used to estimate the effects of the change to the North Anna ECCS evaluation model, and identify and discuss any differences in the analytic approach.

Please submit the responses by December 12, 2012.

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