

January 03, 2002

MEMORANDUM TO: Brian W. Sheron, Associate Director  
for Project Licensing and Technical Analysis  
Office of Nuclear Reactor Regulation

R. William Borchardt, Associate Director  
for Inspection and Programs  
Office of Nuclear Reactor Regulation

FROM: Jack R. Strosnider, Director */RA/*  
Division of Engineering  
Office of Nuclear Reactor Regulation

SUBJECT: STEAM GENERATOR ACTION PLAN - COMPLETION OF ITEM  
NUMBER 3.8 (TAC NO. MB0258)

The purpose of this memorandum is to record the completion of a milestone in the Steam Generator Action Plan (ADAMS Accession No. ML003770259) that is associated with the Steam Generator (SG) Differing Professional Opinion. This milestone is item 3.8, entitled, "Develop a program to monitor the prediction of flaw growth for systematic deviations from expectations."

Item 3.8 relates to the growth rate of flaws in steam generator tubes that are allowed to remain in service under the voltage-based alternate repair criteria (ARC) described in Generic Letter (GL) 95-05. This repair criteria allows predominantly axially oriented outside diameter stress corrosion cracking at the tube support plate elevations to remain in service if the voltage response from the flaw is below the repair limit. The voltage-based ARC correlates the burst pressure and the leakage to the voltage response of the flaw. To demonstrate structural and leakage integrity of the degraded steam generator tubes for the next operating cycle, GL 95-05 specifies leakage and burst criteria that licensees must meet. Flaw growth, measured in terms of voltage change, is an essential part of this assessment.

In accordance with GL 95-05, licensees submit information related to the structural and leakage integrity of the tubes within 90-days (the 90-day report) of completion of the steam generator tube inspections. The information submitted includes the actual voltage distribution and the projected voltage distribution for the next operating cycle. It also includes the tube burst probability and postulated leakage under main steam line break differential pressure conditions. The projected voltage distribution with the resultant tube burst probability and leakage estimates account for flaw growth.

CONTACT: John Tsao, EMC/DE  
301-415-2702

Historically, the staff has routinely reviewed these 90-day reports and compares the tube burst probability and leakage to the criteria specified in GL 95-05 (In response to the Office of Inspector General report on the Indian Point 2 (IP2) event and the recommendations of the IP2 lessons learned task group, the staff formalized the review process as a part of closing out milestones 1.10 and 1.12 of the steam generator action plan). In addition, the staff compares the predicted values to actual values. If the predicted values are conservative, the flaw growth distribution used in the prediction is typically considered to be within expectations. If the predicted values are not conservative when compared to the actual values, the staff evaluates the root cause and ensures appropriate corrective actions are taken.

In summary, the staff believes that any systematic deviations from expectations in flaw growth will be detected and addressed in the staff review of the 90-day reports. The staff concludes that with the GL 95-05 guidance and staff's review process, the monitoring of flaw growth specified in Action Plan Item 3.8 is adequately addressed. On the basis of this memorandum, we consider Steam Generator Action Plan Item 3.8 closed.

cc: J. Riley, NEI

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CONTACT: John Tsao, EMCB/DE  
301-415-2702

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