From: Peter Tam
To: internet:patricia.furio@constellation.com
Date: 3/9/04 8:19AM
Subject: Calvert Cliffs Unit 1: Draft RAI on Relaxation of Order EA-03-009 **(TAC MC1921)**

Pat:

The NRC staff is reviewing your request for relaxation dated January 30, 2004, and has developed the following draft comments/questions. Please call me to set up a conference call with our reviewer, Eric Reichel, to discuss these:

Relaxation Request 1

1. Please provide the total number for each type of RPVH nozzles that are affected by this proposed relaxation.

2. Please provide justification that coverage up to 0.75 inches above the weld will provide an adequate level of quality and safety. Are there residual stress data for Unit 1 that indicates that 0.75 inches is a sufficient level above the weld, or is there any other basis that demonstrates an acceptable level of quality and safety for the restricted inspections?

3. If the guide sleeves are removed, would there be additional geometric constraints on performing the examination required in the Order?

4. Since the Order allows either ultrasonic testing (UT) examination or a surface examination, and the hardship identified is for UT only, you stated that (for Unit 2's response to request for additional information, dated April 4, 2003) a different contractor could provide the capability to deliver an eddy current probe to the region where access is limited nearly 2 inches above the top of the high side of the J-groove welds. However, you stated that the contractor was not available to perform inspections at Calvert Cliffs during the Spring 2003 outage. Since you have had a year to schedule this contractor to perform the eddy current examination for the Spring 2004 Unit 1 outage, please explain why the eddy current inspections are not being performed. It appears that, had this inspection been performed, there would be no need for a relaxation request.

5. Is the 10-million dollar cost just for the removal of the thermal guide sleeves? Please expand on what this estimate includes.

6. Did you perform a crack growth evaluation above the weld? If so, what was the initial flaw size and was it through wall? You have been requested to describe the methodology in detail, and provide examples for the crack growth calculations. Did you perform this evaluation in accordance with the MRP-55 guidelines? Did you perform the evaluation, or was it performed by a contractor? Was the crack growth evaluation based on the as-built weld geometry? Please provide justification if the crack growth evaluation was not based on the as-built weld geometry.

It should be noted that in its Safety Evaluation dated April 18, 2003, the NRC staff understood that you demonstrated hardship to perform certain Order inspections for the Unit 2 2003 outage due to the timing of the issuance of the Order. However, the NRC staff also recognized and

stated in the Safety Evaluation that you did not demonstrate a hardship for Unit 1 or for subsequent Unit 2 outages.

Relaxation Request 2

1. What is the maximum hoop stress in the bottom portion of the nozzle. Please provide crack growth predictions for through-wall axial flaws located at various angles in the CEDM's.

2. What are the yield strengths and heat numbers of the material used in Unit 1?

3. Was the crack growth rates assessed using MRP-55? What was the initial flaw size used? Please provide more detail of what was used in the calculations and what assumptions were used. You are requested to describe the methodology in detail and provide examples for the crack growth calculations. Was the crack growth evaluation based on the as-built weld geometry? If not, please provide justification if the crack growth evaluation was not based on the as-built weld geometry.

4. What is the distance from below the J-groove weld to the area of the nozzle that can not be inspected?

This e-mail aims solely to prepare you and others for the proposed conference call. It does not formally state an NRC staff position, nor does it formally request for additional information. The disposition of the above questions/comments will be discussed in the conference call.

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