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To: <RLF2@nrc.gov>
Date: 6/17/02 7:03AM
Subject: Open Item 4.3-6 - Supplemental Information

Rani,

When we last discussed this item, we were going down the path of trying to explain how the McGuire reactor vessels met RG 1.43. My research in this area has not been productive with respect to RG 1.43. However, I was able to find substantial licensing history relative to the subject of underclad cracking and provided copies of the docketed correspondence to you on 6/12. Now the rest of the story.

As background, Westinghouse has submitted WCAP-15338, "A Review of Cracking Associated with Weld Deposited Cladding in Operating PWR Plants" for staff approval. Chapter 3 of WCAP-15338, "Plant Experiences with Defects in and Under the Weld-Deposited Cladding" provides a description of the history of the underclad cracking concern. Several references are listed within Chapter 3 including two that pertain to Duke plants - McGuire Unit 2 and Catawba Unit 1- References 19 and 21.

The licensing history of this issue for McGuire begins with an NRC letter dated 05/12/80 to Duke requesting very specific information concerning both McGuire reactor vessels. In a letter dated 06/06/80, Duke provided the requested information. In its SER Supplement 4 dated January 1981, the staff provided its evaluation of Underclad Cracking in Reactor Vessel Nozzles (page 5-3). The fabrication process used by Combustion Engineering was evaluated and not expected to result in underclad cracking. However, for McGuire Unit 2, the staff did not have confidence in the fabrication processes used by the vessel vendor and required an ultrasonic examination for underclad cracking be performed on the Unit 2 reactor vessel nozzles prior to issuance of an operating license.

Subsequently, by letter dated 02/18/1983 as part of the process of closing several actions items, Duke informed the NRC that reactor vessel nozzle examinations had in fact been performed in October 1980. No additional docketed correspondence has been located on this topic after this date.

However, Duke has been able to locate the reports that document the results of the examinations on the McGuire Unit 2 nozzles and the Catawba Unit 1 nozzles. (I believe that these reports are References 19 and 21 of WCAP-15338 even though there are no report numbers on my copies of the reports) It does not appear that these reports were ever submitted to NRC nor does it appear that they were ever reviewed by inspectors on-site during the initial licensing of McGuire.

It does appear that these two reports may provide the objective evidence needed by the staff to confirm that underclad cracking did not exist then and does not exist now at the McGuire Unit 2 vessel or the Catawba Unit 1 vessel. The previous staff decision contained in Supplement 4 concerning McGuire 1 should still be valid. I also think that all of this information clearly demonstrates that underclad cracking is not an aging effect nor is it a TLAA for either McGuire or Catawba. Furthermore, McGuire and Catawba do not need the flaw growth analyses provided in WCAP-15338 for any reason.

My technical staff is currently reviewing these reports. One or both of these reports can be made available for staff review in support of McGuire and Catawba license renewal. If the staff does want to see these reports, then I suggest that they be sent up via overnight delivery so as to permit a timely review by the staff.

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