

Davis-BesseNPEm Resource

From: CuadradoDeJesus, Samuel
Sent: Wednesday, August 24, 2011 9:20 AM
To: custerc@firstenergycorp.com; dorts@firstenergycorp.com
Cc: Klos, John; Min, Seung; Rogers, Billy; Davis-BesseHearingFile Resource
Subject: Davis Besse-Request for a Teleconference
Attachments: DB D-RAI RAI 3 1 2 2 16-1 Aug-22-2011 v6.docx

Cliff

Please let me know when we can have a Teleconference to discuss the topics listed below.

Topics of Discussion

- 1) **August 17, 2011 Response to RAI 3.3.2.2.5-2**
Revised AMP B.2.9 Collection, Drainage, and Treatment Components Inspection Program. The NRC staff will request an updated B.2.9 "scope of program" section that repeats the new program's description shown in the letter's B.2.9, program description section and a revised acceptance criteria element to include acceptance criteria for elastomeric components now added to the scope.
- 2) **August 17, 2011 Supplemental Response - Abandoned Equipment**
Need to discuss commitment 26 implementation schedule
- 3) **August 17, 2011 Supplemental Response - steam generator aging management review tube-to-tubesheet weld**
The applicant stated the tube-to-tubesheet welds (Alloy 600 welds) for its steam generators do not have a license renewal intended function and therefore, are not subject to an aging management review. However, the staff found a need to further confirm that the original design analysis of the applicant's once-through steam generators concluded that the interference fit between the tube and the tubesheets was sufficient to ensure the structural and leak-tight integrity of the tube-to-tubesheet joints, without a need for crediting the tube-to-tubesheet welds.
(See attached Draft RAI)

Regards,

Samuel Cuadrado de Jesús

Project Manager

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**Draft RAI Regarding the DB Steam Generator Tube-to-tubesheet Welds:
Follow-up for the Applicant's Letter Dated August 17, 2011**

August 22, 2011

Background

By its letter dated August 17, 2011, the applicant addressed its review results on cracking due to primary water stress corrosion cracking (PWSCC) of steam generator nickel alloy tube-to-tubesheet welds in response to the discussion held in a teleconference call dated July 13, 2011.

In the letter, the applicant stated that upon further review after the conference call with the NRC, it determined that the tube-to-tubesheet welds (Alloy 600 welds) for its steam generators do not have a license renewal intended function and therefore, are not subject to an aging management review. The applicant also stated that the steam generators are Babcock & Wilcox Model 177-FA, once-through design and the tubes and the tubesheets of the steam generators form the pressure boundary between the fluid in the secondary system and the reactor coolant system. The applicant further stated that as provided in USAR Section 5.5.2.3, the tubes are expanded (to a partial depth) into the tubesheet and the tubes are seal welded to the tubesheet near the tube ends and that the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section XI, Division 1, 1995 Edition with 1996 Addenda, IWA-9000 defines a seal weld as a nonstructural weld intended to prevent leakage, where the strength is provided by a separate means. In addition, the applicant stated that the "separate means" in this case being the tube-to-tubesheet expansion joint which forms the pressure boundary and that the tube-to-tubesheet welds are seal welds and therefore, are not part of the pressure boundary.

Issue

The applicant stated the tube-to-tubesheet welds (Alloy 600 welds) for its steam generators do not have a license renewal intended function and therefore, are not subject to an aging management review. However, the staff found a need to further confirm that the original design analysis of the applicant's once-through steam generators concluded that the interference fit between the tube and the tubesheets was sufficient to ensure the structural and leak-tight integrity of the tube-to-tubesheet joints, without a need for crediting the tube-to-tubesheet welds.

Request

1. Confirm that the original design analysis of the applicant's once-through steam generators did not credit the tube-to-tubesheet welds for ensuring the structural and leak-tight integrity of the tube-to-tubesheet joints. In other words, please, confirm that the original design analysis of the once-through steam generators demonstrated that the interference fit between the tube and the tubesheets were capable of withstanding all design loads (with the appropriate margins) and for ensuring the leak-tight integrity of the joints.

2. If the original design analysis did not conclude that the interference fit between the tube and the tubesheets was sufficient to ensure the structural and leak-tight integrity of the tube-to-tubesheet joints, describe how cracking due to PWSCC will be managed in the steam generator tube-to-tubesheet welds.