NRR-PMDAPEm Resource

From: Feintuch, Karl
Sent: Monday, July 23, 2012 12:55 PM
To: Jack Gadzala
Subject: FW: ME7727 - KPS Reactor Vessel Internals Inspection Plan review - 7/23/2012 Conference Call Record - discussion of RAII EVIB-Cher-017
Attachments: ME7727 RAII-Cher-017 .docx; Clevis Bolts IMG_1403.pdf

FYI - Record of today's conference call

From: Feintuch, Karl
Sent: Monday, July 23, 2012 12:46 PM
To: Cheruvenki, Ganesh; Hiser, Allen; Medoff, James
Subject: ME7727 - KPS Reactor Vessel Internals Inspection Plan review - 7/23/2012 Conference Call Record - discussion of RAII EVIB-Cher-017

Call started at 9:30 AM ET.

Participation –
NRC: Karl Feintuch, Ganesh Cheruvenki, Al Hiser, James Medoff
Dominion / Kewaunee: Jack Gadzala, Phil Bukes, Chuck Tomes

Agenda:
Discussion of RAI item –
ME7727-RAII-EVIB-Cher-017-2012-07-17 (see attached Word document)

(Color photo (.JPG) is attached from which a black and white copy was used to facilitate discussion during the 7/23/12 call.)

The licensee response to this RAI item is planned for August 23, 2012.

Hearing Identifier: NRR_PMDA
Email Number: 419

Mail Envelope Properties (Karl.Feintuch@nrc.gov20120723125400)

Subject: FW: ME7727 - KPS Reactor Vessel Internals Inspection Plan review - 7/23/2012 Conference Call Record - discussion of RAII EVIB-Cher-017
Sent Date: 7/23/2012 12:54:43 PM
Received Date: 7/23/2012 12:54:00 PM
From: Feintuch, Karl

Created By: Karl.Feintuch@nrc.gov

Recipients:
"Jack Gadzala" <jack.gadzala@dom.com>
Tracking Status: None

Post Office:

Files	**Size**	**Date & Time**
MESSAGE	823	7/23/2012 12:54:00 PM
ME7727 RAII-Cher-017 .docx	15306	
Clevis Bolts IMG_1403.pdf	616865	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

DRAFT REQUEST FOR ADDITIONAL INFORMATION (RAI)
ME7727-RAII-EVIB-Cher-017-2012-07-17
RELATED TO LICENSEE'S REACTOR VESSEL INTERNALS INSPECTION PLAN REVIEW REQUEST
KEWAUNEE POWER STATION (TAC NO. ME7727)
DOCKET NO. 50-305

By letter dated December 12, 2011, Dominion Energy Kewaunee, Inc. (DEK, the licensee), submitted an inspection plan for the reactor vessel internals (RVI) components at Kewaunee Power Station (KPS). In its e-mail submittal dated March 19, 2012, the licensee submitted the Technical Report KLR-1309A, "License Renewal Project, Aging Management Program, ASME Section XI, In-service Inspection, Subsection IWB, IWC, and IWD, Reactor Vessel Internals Inspection, Kewaunee Power Station," to the NRC staff for review. Pursuant to the license renewal commitments items 1 and 2 addressed in Chapter 15, Table 15.7.1, "License Renewal Commitments," of the Updated Final Safety Evaluation Report (UFSAR), the licensee requested that the NRC staff review and approve the subject inspection plan.

The NRC staff reviewed the licensee's response (dated June 28, 2012) to its question ME7727-RAII-EVIB-CHER-006-2012-05-09, and the NRC staff has some concerns regarding the aging degradation in Alloy X-750 clevis insert bolts. Consequently, the NRC staff developed a follow-up question (below) to address this issue.

ME7727-RAII-EVIB-Cher-017-2012-07-17

According to Section A.1.4 in MRP-175, "Materials Reliability Program: PWR Internal Aging Degradation Mechanism Screening Threshold Values," susceptibility to stress corrosion cracking (SCC) in Nickel Base Alloy X-750 depends on the type of heat treatment that is performed on the alloy. High temperature heat treatment (HTH) process that is used on Alloy X-750 offers better resistance to SCC than the other age hardened heat treatment processes.

Previous operating experience in a US PWR unit indicates that the Alloy X-750 clevis insert bolt experienced cracking. In Table 4-9 of the MRP-227-A report, the MRP identified only wear as an aging mechanism for the clevis insert bolts.

A - Based on the operating experience as stated above, the staff believes that cracking should also be included as an active aging degradation in the clevis insert bolts. Therefore, the staff requests that the licensee confirm that Alloy X-750 material in HTH condition was used for clevis insert bolts at KPS.

B - If the Alloy X-750 material is not in HTH condition, the staff requests that the licensee include verification of aging degradation due to cracking in its inspection and evaluation guidelines for these bolts at KPS.

C - VT-3 examination of the bolts every 10 years would detect completely failed or missing bolts but not partially cracked bolts. Therefore, the staff requests the licensee to provide:
(1) justification that VT-3 technique would be adequate for monitoring the cracking issue in the clevis insert bolts before it fails;
(2) information on the number of clevis insert bolts that are necessary for maintaining their function during the extended period of operation; and,
(3) information on the number of clevis insert bolts that are currently present at KPS.


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