

From: <erachp@comcast.net>
To: Peter Wen <pxw@nrc.gov>
Date: 07/05/2006 1:46:04 PM
Subject: FW: Handling of generic issues

Peter,
Sorry. I forgot to include you on this. See attached. Please call if you need anything else.
Erach

----- Forwarded Message: -----

From: erachp@comcast.net
To: wapavinich@comcast.net (Wayne Pavinich), JacksonWR@msn.com (Bob Jackson)
Subject: Handling of generic issues
Date: Fri, 30 Jun 2006 02:02:08 +0000

Bob/Wayne,
Attached is how I am addressing the three generic issues: Water chemistry plus OTI program; Bolting integrity program; and oil analysis program w/o OTI. I want to keep it simple.
Let me know if you have any questions.
Erach

CC: Jim Davis <jad@nrc.gov>

Mail Envelope Properties (44ABFAC8.D76 : 19 : 7542)

Subject: FW: Handling of generic issues
Creation Date 07/05/2006 1:45:24 PM
From: <erachp@comcast.net>

Created By: erachp@comcast.net

Recipients
nrc.gov
 TWGWPO04.HQGWDO01
 PXW (Peter Wen)

nrc.gov
 OWGWPO03.HQGWDO01
 JAD CC (James Davis)

Post Office	Route
TWGWPO04.HQGWDO01	nrc.gov
OWGWPO03.HQGWDO01	nrc.gov

Files	Size	Date & Time
MESSAGE	576	07/05/2006 1:45:24 PM
TEXT.htm	871	
Mail		
Mime.822	21564	

Options
Expiration Date: None
Priority: Standard
ReplyRequested: No
Return Notification: None

Concealed Subject: No
Security: Standard

Junk Mail Handling Evaluation Results
Message is eligible for Junk Mail handling
This message was not classified as Junk Mail

Junk Mail settings when this message was delivered
Junk Mail handling disabled by User
Junk Mail handling disabled by Administrator
Junk List is not enabled

Junk Mail using personal address books is not enabled
Block List is not enabled

Here is how I am addressing the three generic issues of :

1. Water chemistry control programs plus OTI as verification
2. Bolting integrity program
3. Oil analysis program without verification

3.3.2.1.1 Loss of material due to general, pitting, crevice and galvanic corrosion, and cracking due to stress corrosion cracking where PNPS has credited Water Chemistry Control - BWR Program with One-Time Inspection Program as the verification program

In the discussion section of Table 3.3.1, items 17, 23, 24, 30, 31, 37, and 38, the applicant stated in the discussion column that the One-Time Inspection (OTI) Program will be used to verify the effectiveness of the water chemistry program. However, for those line items in Table 3.3.2-X, where these Table 3.3.1 line items are referenced, only the Water Chemistry Control - BWR Program is credited. The project team asked the applicant a generic question to resolve the discrepancy why the OTI Program was not credited in the Table 2 line items that references these Table 1 line items.

In its response, the applicant stated that since the OTI Program is applicable to each water chemistry control program, it is also applicable to each line item in Table 2 that credits a water chemistry control program. LRA Table 3.3.1 indicates that the OTI Program is credited along with the water chemistry control programs for line items where GALL recommends a one-time inspection to confirm water chemistry control. Tables 3.3.2-X credits the OTI Program through reference to the associated Table 1 line item. **The applicant further stated that the water chemistry control programs in LRA Appendices A and B will be revised to clearly indicate that the OTI Program will verify the effectiveness of the Water Chemistry Control - BWR Program. This will require a supplement to the LRA. {Open Item}.**

In a letter dated MM-DD-YYYY (MLxxxxxxxx), the applicant stated that...(to be completed when supplement is received)

3.3.2.1.2 Loss of material, loss of pre-load and cracking of carbon steel and stainless steel bolting in various external environments

The applicant does not include a Bolting Integrity Program in the PNPS LRA. Instead, the applicant credits alternate programs such as System Walkdown, Service Water Integrity and Buried Piping and Tanks Inspection programs. The GALL report AMP, XI.M18, "Bolting Integrity", provides several recommendations in the 10-element evaluation such as selection of bolting materials, use of lubricants and sealants, and additional recommendations of NUREG-1339. The alternate programs may be acceptable for inspection, however, they do not address the preventive actions. For section 3.3, this applies to Table 3.3.1, line items 19, 27, 43, 55, 58, 78, and 94. The project team asked the applicant to clarify how PNPS meets these recommendations or provide justification why a bolting program should not be provided.

In its response, the applicant stated that a Bolting Integrity program will be developed that will address the aging management of bolting in the scope of license renewal. Also, a copy of the aging management program basis will be provided for review. The Bolting Integrity Program will be implemented prior to the period of extended operation in accordance with commitment 32. The LRA will be supplemented to include descriptions of Bolting Integrity Program in Appendices A and B and to identify where the program is

applicable. {Open Item}

In a letter dated MM-DD-YYYY (MLxxxxxxxx), the applicant stated that...(to be completed when supplement is received)

3.3.2.2.9.2 Loss of Material Due to General, Pitting, Crevice, Microbiologically-Influenced Corrosion and Fouling [Item 2]

The project team reviewed PNPS LRA Section 3.3.2.2.9.2 against the criteria in SRP-LR Section 3.3.2.2.9.2.

SRP-LR Section 3.3.2.2.9.2 states that a loss of material due to general, pitting, crevice, MIC, and fouling could occur for steel heat exchanger components exposed to lubricating oil. The existing aging management program relies on the periodic sampling and analysis of lubricating oil to maintain contaminants within acceptable limits, thereby preserving an environment that is not conducive to corrosion. However, control of lube oil contaminants may not always have been adequate to preclude corrosion. Therefore, the effectiveness of lubricating oil control should be verified to ensure that corrosion is not occurring. The GALL Report recommends further evaluation of programs to manage corrosion to verify the effectiveness of the lube oil program. A one-time inspection of selected components at susceptible locations is an acceptable method to ensure that corrosion is not occurring and that the component's intended function will be maintained during the period of extended operation.

In the PNPS LRA Section 3.3.2.2.9.2, the applicant states that the loss of material due to general, pitting, crevice, MIC and fouling for carbon steel heat exchanger components exposed to lubricating oil is an aging effect requiring management in the auxiliary systems at PNPS, and is managed by the Oil Analysis Program. This program includes periodic sampling and analysis of lubricating oil to maintain contaminants within acceptable limits, thereby preserving an environment that is not conducive to corrosion or fouling. Operating experience at PNPS has confirmed the effectiveness of this program in maintaining contaminants within limits such that corrosion and fouling has not and will not affect the intended functions of these components.

The applicant depends on operating experience at PNPS to verify the effectiveness of the Oil Analysis Program. The project team asked the applicant how it can make this statement if inspection has not been performed. In its response, the applicant stated that during the performance of routine maintenance on components that contain lubricating oil, visual inspections of these components would identify degraded conditions that could be attributed to an ineffective Oil Analysis Program. The corrective action program at PNPS has a low threshold for the identification of degraded condition such that corrosion or cracking of components would be identified as part of this program. The review of operating experience at PNPS for the last five years did not identify any condition reports that indicated an ineffective Oil Analysis Program or that identified degraded component conditions such as corrosion or cracking in a lubricating oil environment.

During the past five years, many visual inspections of components containing lubricating oil have been performed during corrective and preventive maintenance activities. The visual inspection of these components would identify degraded conditions such as corrosion or cracking that could be attributed to an ineffective Oil Analysis Program. No condition reports that identified degraded component conditions, such as corrosion and cracking in a lubricating oil environment, were initiated as a result of these inspections. These past inspections at

PNPS serve in lieu of a one-time inspection to provide confirmation of the effectiveness of the Oil Analysis Program.

The project team reviewed Operating Experience Review Report, LRPD-05, Revision 0, and confirmed that there were no condition reports generated for degraded conditions of components in a lubricating oil environment. On the basis that periodic inspections of components in a lubricating environment are performed during maintenance activities, and that operating experience has shown no degraded conditions, the project team determined that the Oil Analysis Program is appropriate for the aging effects/mechanisms identified and provide assurance that the aging effects/mechanisms are effectively managed through the period of extended operation. The Oil Analysis Program was evaluated by the project team and found acceptable for managing aging degradation.

The project team found that, based on the programs identified above, the applicant has met the criteria of SRP-LR Section 3.3.2.2.9.2 for further evaluation. The project team found that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended functions will be maintained during the period of extended operation, as required by 10 CFR 54.21(a)(3).