

NRR-PMDAPEm Resource

From: Thadani, Mohan
Sent: Wednesday, September 24, 2014 8:08 AM
To: Wanda D Craft (Generation - 6) (wanda.d.craft@dom.com)
Cc: Rosenberg, Stacey; Poehler, Jeffrey
Subject: AGING MANAGEMENT PROGRAM DESCRIPTION: INSERVICE INSPECTION - REACTOR VESSEL INTERNALS

Wanda:

By letter dated July 31, 2013, Dominion Nuclear Connecticut (the licensee) submitted a document entitled "Aging Management Program Description: Inservice Inspection - Reactor Vessel Internals" in support of License Renewal Commitment #13 for Millstone Power Station, Unit 2. The submittal contains an updated Reactor Vessel Internals (RVI) Aging Management Program and RVI Inspection Plan in accordance with topical report "Material Reliability Program: Pressurized Water Reactor Inspection and Evaluation Guidelines" (MRP-227-A). The NRC staff is reviewing the licensee's submittal to determine whether Commitment #13 can be considered fulfilled and will issue a safety evaluation documenting its conclusion. By letter dated July 21, 2014, the licensee responded to the NRC staff's May 14, 2014 request for additional information (RAI). The staff has identified a need for additional information related to some of the licensee's RAI responses. The NRC Staff's supplemental RAI is provided below. The NRC staff requests Licensee's response to this request within 30 days from the date of this email to facilitate timely completion of the requested review of the license's submittal.

Sincerely,

Mohan C Thadani

Senior Project Manager
Millstone, Ginna, and Constellation Fleet
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
(301) 415-1476 Mohan.Thadani@nrc.gov

MILLSTONE POWER STATION, UNIT 2,
REQUEST FOR ADDITIONAL INFORMATION
AGING MANAGEMENT PROGRAM DESCRIPTION
INSERVICE INSPECTION - REACTOR VESSEL INTERNALS
DOCKET NO. 50-336

RAI 2-1

For the cast austenitic stainless steel (CASS) core support columns at Millstone Power Station, Unit 2 (MPS2), the licensee was able to screen out thermal embrittlement (TE) for 63 of 68 columns for which certified material test reports (CMTRs) were available. The columns would therefore be susceptible to irradiation embrittlement (IE) and possibly TE for those columns lacking CMTRs. Therefore, in request for additional information (RAI) 2, the staff requested the licensee clarify the scope of the core support column weld inspection, and to provide either a functionality analysis for the columns or modify its reactor vessel internals (RVI) Inspection Plan to add an inspection of the columns as a Primary or Expansion category if no part of the core support columns other than the welds is covered by the current inspection.

The licensee provided the results of its statistical analysis showing those columns for which the ferrite content was not available were extremely unlikely to exceed the TE screening criteria; therefore, the licensee concluded the columns were susceptible to IE only. The licensee's July 21, 2014 response to RAI 2 indicates that the licensee considers the Primary inspection of the core support column welds provides adequate management for IE because a portion of the CASS material is exposed in the weld area to a bounding level of irradiation. However, the licensee's response did not discuss actions to be taken if cracking is found in these welds.

What actions would be taken to ensure the integrity of the core support columns if evidence of service-induced cracking was detected during the "Primary" inspection of the core support column welds?

RAI 2-2

In RAI 8, Item 1 the staff requested, that the licensee provide the plant-specific fatigue evaluations for the RVI components for which fatigue evaluations are being credited in lieu of inspections.

In its July 21, 2014, response to RAI 8, Item 1, the licensee indicated a plant-specific fatigue evaluation was not performed but that the evaluation for MPS2 was developed based on comparisons and scaling of analyses performed by the vendor for another plant. The response also provided an outline of the methodology of the evaluation.

However, the staff requires more detail of the fatigue evaluation to complete its review. The staff requests the licensee provide the following:

1. Provide a reference for the fatigue analysis methodology, such as an American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) subsection. Specifically, was the reference plant methodology per the ASME Code, Section XI, Subsection NG?
2. Identify the transients considered in the evaluation and compare the numbers of each transient for MPS2 versus the reference plant. In addition, identify any differences in the types of applicable transients or the severity of the transients between the reference plant and MPS2.
3. Describe the method by which the effects of the reactor coolant system water environment were considered in the fatigue analysis, and the results of the environmentally-assisted fatigue calculations.
4. How is the analysis described in the RAI 8 response documented at MPS2 such that it will be incorporated in the current licensing basis as a time-limited aging analysis?

Hearing Identifier: NRR_PMDA
Email Number: 1588

Mail Envelope Properties (Mohan.Thadani@nrc.gov20140924080800)

Subject: AGING MANAGEMENT PROGRAM DESCRIPTION: INSERVICE INSPECTION
- REACTOR VESSEL INTERNALS
Sent Date: 9/24/2014 8:08:10 AM
Received Date: 9/24/2014 8:08:00 AM
From: Thadani, Mohan

Created By: Mohan.Thadani@nrc.gov

Recipients:

"Rosenberg, Stacey" <Stacey.Rosenberg@nrc.gov>

Tracking Status: None

"Poehler, Jeffrey" <Jeffrey.Poehler@nrc.gov>

Tracking Status: None

"Wanda D Craft (Generation - 6) (wanda.d.craft@dom.com)" <wanda.d.craft@dom.com>

Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	5076	9/24/2014 8:08:00 AM

Options

Priority: Standard

Return Notification: No

Reply Requested: No

Sensitivity: Normal

Expiration Date:

Recipients Received: