

NRR-PMDAPem Resource

From: Galvin, Dennis
Sent: Thursday, December 17, 2015 1:42 PM
To: Richard Hightower (Richard.Hightower@duke-energy.com); Scott Connelly (Scott.Connelly@duke-energy.com)
Cc: Barillas, Martha; Cheruvenki, Ganesh; Dijamco, David
Subject: Robinson MRP-227 Draft Action Item 5 and 7 RAIs ME9633
Attachments: Robinson Draft MRP-227 RAI 2015-12-17 ME9633.pdf

Richard and Scott,

By letter dated September 26, 2012 (Agencywide Documents Access and Management (ADAMS) Accession No. ML122780489), Duke Energy Progress, Inc. (previously known as Carolina Power and Light Company), the licensee, for H. B. Robinson Steam Electric Plant, Unit No. 2 (Robinson), submitted an aging management program (AMP) for the reactor vessel internals (RVI). The licensee used the Materials Reliability Program (MRP)-227-A report, "Pressurized Water Reactor Internals Inspection and Evaluation Guidelines," (ADAMS Accession No. ML120170453) and its supporting reports as technical bases for developing Robinson's AMP. MRP-227-A includes the Nuclear Regulatory Commission (NRC) final safety evaluation (SE), which documents the NRC staff review and was issued on December 16, 2011 (ADAMS Accession No. ML11334A009).

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the licensee's submittal and determined that additional information was needed in order to complete its review. By correspondence dated March 27, 2013, January 8, 2014, April 24, 2014, and June 16, 2014 (ADAMS Accession Nos. ML13079A293, ML14016A279, ML14115A440 and ML14167A345), the NRC staff issued Requests for Additional Information (RAIs) related to Action Item 7 of the NRC's staff SE for MRP-227-A (Action Item 7). By letters dated May 23, 2013 and February 19, 2014 (ADAMS Accession Nos. ML13156A144 and ML14056A193), the licensee provided associated RAI responses.

The NRC staff has determined additional information is needed to complete its review of Action Items 5 and 7. Please see the attached RAIs in DRAFT form.

A Sensitive Unclassified Non-Safeguards Information (SUNSI) review was completed by the staff on the draft RAIs and the staff concluded the RAIs do not contain SUNSI. If you find any information needs to be withheld from the public, please notify me within 5 days of receipt of this email.

Please submit your response to these RAIs within 30 days of this email. If you need a clarification call for the attached draft RAIs, or you need to change the RAI response due date, please contact me at (301) 415-6256.

Respectfully,

Dennis Galvin
Project Manager
NRC/NRR/DORL/LPL2-2
301-415-6256

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Options

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REQUEST FOR ADDITIONAL INFORMATION
REGARDING THE AGING MANAGEMENT PROGRAM FOR THE
REACTOR VESSEL INTERNALS AT THE
H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2
DUKE ENERGY PROGRESS, INC.
DOCKET NUMBER 50-261

By correspondence dated April 24, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14115A440), the staff issued a follow up request additional information (RAI), RAI-5(b)-1-1, as a part of its review of the aging management program (AMP) reactor vessel internals (RVI) at the H. B. Robinson Steam Electric Plant Unit No. 2 (Robinson). RAI-5(b)-1-1 is in reference to the AMP related to Robinson's cast austenitic stainless steel (CASS) lower support columns (LSC) in the reactor vessel. By correspondence dated June 16, 2014 (ADAMS Accession No. ML14167A345), the U.S. Nuclear Regulatory Commission (NRC) staff informed the licensee that it could defer answering RAI-5(b)-1-1 since the NRC staff and industry were working on new screening criterion for the RVI CASS materials. In a letter dated March 13, 2015, PWR Owners Group (PWROG), submitted a proprietary document, PWROG-14048-P, Revision 0, "Functionality Analysis: Lower Support Columns," to the staff for information. The staff has assessed the report (ML15334A462) and has made conclusions potentially applicable to Robinson.

To ensure that the licensee's evaluation of Action Item 7 (from the NRC final safety evaluation (SE) (ADAMS Accession No. ML11308A770) of the Materials Reliability Program (MRP)-227-A report, "Pressurized Water Reactor Internals Inspection and Evaluation Guidelines," (ADAMS Accession No. ML120170453)) is consistent with PWROG-14048-P, the staff requests that the licensee address the following additional RAI in reference to the functionality of the LSCs. This request supersedes RAI-5(b)-1-1 discussed in the April 24, 2014 and June 16, 2014 correspondence.

RAI-5(b)-1-2:

The staff has determined that the flaw tolerance analysis contained in report PWROG-14048-P utilized conservative assumptions to demonstrate that the likelihood of failure of the LSCs is low during the period of extended operation (PEO). It is reasonable to infer that the functionality of the LSCs will be maintained during the PEO if the likelihood of failure of the LSCs is shown to be low. Therefore, the staff requests the licensee to demonstrate how the flaw tolerance analysis in PWROG-14048-P is applicable to the Robinson LSCs using plant-specific parameters (such as LSC geometry and number of LSCs) and conditions (such as loading conditions and LSC stresses).

If the licensee determines that PWROG-14048-P is not applicable to the Robinson LSCs or chooses not to apply it, the staff requests the licensee to identity its approach to demonstrating that the functionality of the LSCs will be maintained during the PEO.

RAI-6

In Section 6.2.5, "SE Applicant/Licensee Action Item 5: Application of Physical Measurements as part of I&E [Inspection and Evaluation] Guidelines for B&W [Babcox and Wilcox], CE [Combustion Engineering], and Westinghouse RVI Components," of WCAP-17077 Revision 1, "PWR Vessel Internals Program Plan for Aging Management of Reactor Internals at Robinson Nuclear Plant," (ADAMS Accession No. ML12278A399) the licensee describes actions to address Action Item 5 from the NRC final SE for the MRP-227-A report. The actions includes plans to replace the hold down spring instead of performing MRP-227-A inspections/physical measurements at Robinson. Confirm that the hold down spring has been replaced at Robinson and the materials used.