

Guzman, Richard

From: Guzman, Richard
Sent: Monday, September 17, 2012 10:26 AM
To: 'Wanczyk, Robert J'; 'Couture III, Philip'
Cc: 'Devincentis, James M'
Subject: Draft RAI RE: LAR to Revise License Renewal Commitments - One-Time Inspection Program
Attachments: Draft RAI OTI.docx

Phil and Bob,

Attached is the draft RAI related to the one-time inspection program aspects of the subject license amendment request. Please review and let me know if you'd like to have a call w/the technical staff for any questions or clarifications. I intend to include these questions w/the selective leaching RAIs and send formally as a single RAI letter once we complete our clarification call(s).

Thanks,
Rich

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REQUEST FOR ADDITIONAL INFORMATION
REGARDING LICENSE AMENDMENT REQUEST TO REVISE
LICENSE RENEWAL COMMITMENTS
ENTERGY NUCLEAR OPERATIONS. INC.
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271
LICENSE NO. DPR-28

The Nuclear Regulatory Commission (NRC) staff is reviewing the information provided by Entergy Nuclear Operations, Inc. (the licensee) for Vermont Yankee Nuclear Power Station in its license amendment request (LAR) dated March 12, 2012, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12079A031), and has determined that additional information is necessary to complete its review. Please provide a response which addresses the following request for additional information (RAI):

RAI-3

Background for RAI-3 - One-Time Inspection Program

The proposed revision to license renewal commitment (LRC) No. 16 states that the reactor vessel flange leak-off line will be removed from the One-Time Inspection Program; but that two welds from the line will be included in the sample population for UT examination of socket welds under LRC No. 53. The proposed revision also states that the reactor vessel flange leak off piping is included in the population of other stainless steel components exposed to treated water that are managed by the Water Chemistry Control – BWR program.

LRC Nos. 16 and 53 are both associated with the One-Time Inspection Program. LRC No. 53 is to perform periodic volumetric inspections of a sample of small-bore Class 1 socket and butt welds. LRC No. 16 is to implement the One-Time Inspection Program as described in License Renewal Application (LRA) Section B.1.21 by March 21, 2012.

The One-Time Inspection Program relies on examination of a sample of components within the program in order to manage aging; therefore, not all of the components within the program will be examined. If components are removed from the program because they will not be inspected, the sample size for inspection will decrease and may not be representative of the population requiring age management.

Issue

It is unclear to the NRC staff why the licensee is requesting to remove the reactor vessel flange leak-off line from the One-Time Inspection Program. The NRC staff noted that the line must remain in the One-Time Inspection Program in order to remain part of the population of welds examined by the One-Time Inspection Program under LRC No. 53. The NRC staff also noted that the piping would be considered to be managed by the One-Time Inspection Program,

regardless of whether it was selected for inspection, provided that it remains in the population of stainless steel components exposed to treated water from which samples are chosen for examination by the One-Time Inspection Program.

RAI-3 – One-Time Inspection Program

Clarify whether the reactor vessel flange leak off piping will remain in the population of stainless steel components exposed to treated water that are sampled by the One-Time Inspection Program. If this is not the case, explain how the effectiveness of the Water Chemistry Control – BWR Program will be verified for the reactor vessel flange leak-off line if it is removed from the One-Time Inspection Program.

Justify why the reactor vessel flange leak-off line can be removed from the One-Time Inspection Program but still be considered part of the population of components inspected under LRC No. 53.

RAI-4

Background for RAI-4 - One-Time Inspection Program

The proposed revision to LRC No. 16 states that the main steam line flow restrictors will be removed from the One-Time Inspection Program because the components are centrifugally cast and constructed from low molybdenum grade steel; therefore, the components are not susceptible to thermal embrittlement.

LRC No. 16 is to implement the One-Time Inspection Program as described in LRA Section B.1.21 by March 21, 2012. LRA Section B.1.21 states that the main steam line flow restrictors are included in the One-Time Inspection Program to confirm that loss of material, cracking, and reduction of fracture toughness are not occurring or are so insignificant that an aging management program (AMP) is not warranted.

The NRC staff agrees that the main steam line flow restrictors are not susceptible to loss of fracture toughness due to thermal embrittlement if they are constructed of low molybdenum content steel and centrifugally cast. However, the components are still susceptible to loss of material and cracking, for which the One-Time Inspection Program was credited in the LRA to verify the effectiveness of the Water Chemistry Control – BWR Program.

Issue

It is not clear to the staff how the main steam line flow restrictors will be adequately managed for loss of material and cracking if they are removed from the One-Time Inspection Program.

RAI-4 – One-Time Inspection Program

Justify why the main steam line flow restrictors do not require verification that loss of material and cracking are not occurring or provide an alternate program to verify the effectiveness of the Water Chemistry Control – BWR Program for these components.