

From: Guzman, Richard
Sent: Thursday, February 02, 2017 4:36 PM
To: wanda.d.craft@dom.com
Subject: Millstone Unit 2 and 3 - Proposed Alternative RR-04-24 and IR-3-30 for Elimination of RPV Threads in Flange Examination - REQUEST FOR ADDITIONAL INFORMATION (CAC Nos. MF8468 and MF8469)

Wanda,

The NRC staff has reviewed the information provided in the subject submittal dated October 6, 2016 (ADAMS Accession No. ML16287A724), and has determined that additional information is needed to complete its review. Shown below is the NRC staff's request for additional information (RAI) question. Please provide your RAI response by March 2, 2017. Please contact me if you have any questions.

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REQUEST FOR ADDITIONAL INFORMATION  
OFFICE OF NUCLEAR REACTOR REGULATION  
PROPOSED ALTERNATIVE REQUESTS RR-04-24 AND IR-3-30 INSERVICE INSPECTION  
INTERVAL  
MILLSTONE POWER STATION, UNIT 3 THIRD TEN-YEAR INSERVICE INSPECTION  
INTERVAL  
MILLSTONE POWER STATION, UNIT 2 FOURTH TEN-YEAR  
DOMINION NUCLEAR CONNECTICUT, INC.  
DOCKET NOS. 50-336 AND 50-423  
CAC NOS. MF8468 AND MF8469

By letter dated October 6, 2016 (Agencywide Documents Access and Management System Accession No. ML16287A724), Dominion Nuclear Connecticut, Inc. (the licensee), submitted to the U.S. Nuclear Regulatory Commission (NRC), a proposed alternative to the inservice inspection (ISI) requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) for the reactor pressure vessel (RPV) threads in flange at Millstone Power Station, Units 2 and 3 (MPS2 and MPS3), pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 50.55a(z)(1). The proposed alternative is discussed in alternative request numbers RR-04-24 and IR-3-30 for MPS2 and MPS3, respectively. Specifically, the licensee proposes to permanently eliminate the volumetric examination requirements of Section XI of the ASME Code threads in the RPV flange (ASME Code, Section XI, Examination Category B-G-1 "Pressure Retaining Bolting, Greater than 2 inches (50 mm) in Diameter," Item No. B6.40) for the remainder of the MPS2 fourth ten-year ISI interval and for the remainder of the MPS3 third ten-year ISI interval. In 10 CFR 50.55a(z)(1), the licensee is required to demonstrate that the proposed alternative provides an acceptable

level of quality and safety. The technical bases for the licensee's proposed alternative are contained in Electric Power Research Institute (EPRI) report number 3002007626, "Nondestructive Evaluation: Reactor Pressure Vessel Threads in Flange Examination Requirements." The NRC staff has determined that the following request for additional information (RAI) is necessary to complete its review and determine whether the licensee has reasonably demonstrated technical adequacy of the proposed alternative and that it would provide an acceptable level of quality and safety.

Table 2 of Attachments 1 and 2 of the submittal shows that most of the load comes from the preload on the bolt (bolt preload), which occurs at low temperature. However, the flaw tolerance evaluation only considers the fracture toughness ( $K_{IC}$ ) at the upper shelf (operating temperature). The NRC staff requests the licensee to provide a comparison between the calculated Table 2 "Preload" values of K and the applicable allowable value for K for MPS2 and MPS3 at the head tensioning temperatures.