

NRR-PMDAPem Resource

From: Watford, Margaret
Sent: Monday, October 31, 2016 8:34 AM
To: Garcia, Richard M.
Cc: Klos, John
Subject: Request for Additional Information Regarding Reactor Steam Dome Pressure License Amendment Request
Attachments: Request for Additional Information Re Columbia Reactor Steam Dome Pressure License Amendment Request (MF8116).pdf

Good afternoon Mr. Garcia,

By letter dated July 12, 2016 (Agencywide Document and Access Management System (ADAMS) Accession No. ML16194A515), Energy Northwest (the licensee) submitted a license amendment request (LAR) for Columbia Generating Station (Columbia). The proposed amendment would reduce the reactor steam dome pressure stated in Technical Specification (TS) 2.1.1 for the reactor core safety limits (SLs). The proposed change addresses a calculation "defect" under Title 10 of the Code of Federal Regulations (10 CFR), Part 21, "Reporting of Defects and Noncompliance," concerning the potential to violate the safety limits during a pressure regulator failure maximum demand open (PRFO) transient, reported by General Electric Energy-Nuclear (GE)

Based on the review of the LAR, the U.S. Nuclear Regulatory Commission (NRC) has determined that additional information is required. Please see the formal request for additional information (RAI) in the attached document and submit your response to the RAI by November 30, 2016.

I will be your point of contact on this LAR but please include John Klos in your responses. Feel free to call or email me if you have any questions.

Thank you,

Maggie Watford
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Subject: Request for Additional Information Regarding Reactor Steam Dome Pressure License Amendment Request
Sent Date: 10/31/2016 8:33:46 AM
Received Date: 10/31/2016 8:33:00 AM
From: Watford, Margaret

Created By: Margaret.Watford@nrc.gov

Recipients:
"Klos, John" <John.Klos@nrc.gov>
Tracking Status: None
"Garcia, Richard M." <rmgarcia@energy-northwest.com>
Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	1410	10/31/2016 8:33:00 AM
Request for Additional Information Re Columbia Reactor Steam Dome Pressure License Amendment Request (MF8116).pdf	78290	

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION (RAI)
REDUCE THE REACTOR STEAM DOME PRESSURE SPECIFIED IN THE
TECHNICAL SPECIFICATION 2.1.1, "REACTOR CORE SLs"
COLUMBIA GENERATING STATION (CAC NO. MF8116)
REACTOR SYSTEMS BRANCH (SRXB)

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The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided in the submittal and would like to discuss the following issues to clarify the submittal.

RAI - 1

In Section 1, "Summary," of Attachment 1 to the application dated July 12, 2016, the license stated:

GE fuel utilizes the GEXL14 and GEXL17 critical power correlations, with an approved pressure range from 700 to 1400 psia [pounds per square inch absolute] (685 to 1385 psig [pounds per square inch gauge]). Columbia has determined that changing the pressure limits in TS SLs 2.1.1.1 and 2.1.1.2 to 685 psig as permitted by NEDC-32851 P-A, Rev. 5, "GEXL14 Correlation for GE14 Fuel", (Reference 2) and NEDC-33292P, Rev. 3, "GEXL17 Correlation for GNF2 Fuel", (Reference 3), provides greater margin for the PRFO transient, such that the dome pressure will remain above the revised TS 2.1 safety limits.

When converting 700 psia to psig, the lower bound pressure for the GEXL17 and GEXL14 correlations is approximately $(700 - 14.7 =) 685.3$ psig. As such, the 685 psig value specified in the proposed TS change is slightly outside the pressure range in which the GEXL17 and GEXL14 correlations are valid for GNF2 and GE14 fuel. Please provide further justification for the proposed 685 psig value or propose a revised pressure value for this TS change that is supported by the GEXL17 and GEXL14 correlations (e.g., 700 psia or 686 psig).