

NRR-PMDAPem Resource

From: Kuntz, Robert
Sent: Monday, March 27, 2017 8:40 AM
To: Loeffler, Richard A.
Subject: Request for Additional Information RE: Monticello Nuclear Generating Plant Integrated Leak Rate Test Interval Extension Request (CAC NO. MF7359)

Mr. Loeffler,

In a letter dated February 10, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16047A272) the Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (hereafter "NSPM" or "the licensee"), requested an amendment to Renewed Facility Operating License No. DPR-22 in the form of changes to the Technical Specifications (TSs) for the Monticello Nuclear Generating Plant (MNGP).

The License Amendment Request (LAR) proposes changes to Appendix A, TSs, to allow extension of the 10-year frequency of the Type A Integrated Leak Rate Test (ILRT) that is required by TS 5.5.11 to 15 years on a permanent basis.

By email dated November 18, 2016 (ADAMS Accession No. ML16323A242) the Nuclear Regulatory Staff (NRC) staff requested additional information to support its review of the amendment request. The NRC staff has completed its review of the information provided in response by letters dated December 16, 2016 (ADAMS Accession No. ML16355A183), January 31, 2017 (ADAMS Accession No. ML17032A038), and February 7, 2017 (ADAMS Accession No. ML17039A673). The NRC staff has determined that additional information is required to complete its review. Below is a request for additional information (RAI). The NRC staff anticipates a response of April 7, 2017. If NSPM requires additional time to respond contact me to discuss a proposed revised response date.

REQUEST FOR ADDITIONAL INFORMATION RELATED TO LICENSE AMENDMENT REQUEST FOR CHANGE TO TECHNICAL SPECIFICATION 5.5.11 TO PROVIDE A PERMANENT EXTENSION OF THE INTEGRATED LEAKAGE RATE (TYPE A) TEST FREQUENCY FROM TEN TO FIFTEEN YEARS MONTICELLO NUCLEAR GENERATING PLANT
DOCKET NO. 50-263
CAC NO. MF7359

1. As provided in the response to request for additional information (RAI) 6.a, the change in population dose of 1.69 person-rem/year or 2% of the total population dose is larger than the acceptance criteria from Section 3.2.4.6 of the Safety Evaluation for the Electric Power Research Institute (EPRI) Technical Report (TR) 1009325, Revision 2, of 1.0 person-rem/year or 1% of the total population dose, whichever is less restrictive. The table provided in response to RAI 6.a indicates that EPRI Class 7 and 7a (severe accident phenomena-induced containment failures) are significant contributors to the change in population dose results.

In addition, according to the response to RAI 6.a, the change in the conditional containment failure probability (CCFP) of 1.66% is above the acceptance criteria of 1.5% from Section 3.2.4.6 of the Safety Evaluation for EPRI TR-1009325, Revision 2.

Given that the reported results are above the criteria for small change, the NRC staff requests that additional quantitative evaluation be performed to determine if the acceptance criteria can be met.

Provide additional evaluation of these criteria, a description of the technical evaluation with justification for the approach, and the updated results.

2. The response to RAI 4.e indicates that change in large early release frequency (Δ LERF) from containment accident pressure (CAP) is estimated using the probabilistic risk assessment (PRA) models for internal and fire events. This is a change in methodology from that presented in the license amendment request (LAR) in which Δ LERF was assumed to be equal to change in core damage frequency (Δ CDF) for CAP.

The RAI responses did not provide sufficient information on the evaluation of Δ LERF due to CAP. Comparing the reported Δ LERF of 4.65E-7/yr (which includes non-CAP related contributors) to the CAP-related Δ CDF of 2.47E-6/yr provided in the response to RAI 6.a indicates that over 81% of CAP related change in CDF is classified as non-LERF. Given that the methodology for this application assumes a large pathway to the environment exists through a non-detected large pre-existing leak in the containment:

- i. Explain how the PRA model distinguishes between LERF and non-LERF for loss of CAP;
 - ii. Explain and justify why there is a significant Δ LERF reduction from the Δ CDF;
 - iii. Discuss the mechanisms and considerations credited for reducing LERF to non-LERF;
 - iv. Provide technical justification for those credited for Δ LERF reduction and their assigned likelihoods in the PRA model.
3. The NRC staff's review found further explanation is necessary regarding results reported in the responses to the RAIs. Address the following:
 - i. In the LAR, Class 7 does not show a dependency on the integrated leakage rate test (ILRT) frequency; however, in the response to RAI 6.a, Class 7 and 7a have a dependency on the ILRT frequency which results in significant contribution to the ILRT risk results. Explain why this dependency has been introduced.
 - ii. Class 3a represents small releases. If Class 3a and Class 7a both represent small releases with dependencies on the ILRT frequency, explain the difference between these categories in the evaluation of the change in CDF over the ILRT frequency.
 - iii. EPRI TR 1009325, Revision 2, guidance stipulates that external events, including fire, should be included in the risk assessment. The February 7, 2017 letter indicates that Fire PRA model changes and enhancements were made, but did not provide the new values for fire CDF and LERF. Please provide these updated values for the Fire PRA baseline risk.
 - iv. EPRI TR 1009325, Revision 2, uses the Regulatory Guide 1.174 change in LERF (Δ LERF) acceptance guidelines for the ILRT extension. The response to RAI 6.a did not provide a clear presentation of the various contributors to the risk estimates to the Class 3b Δ LERF. Summarize in a table format the numerical contributions to the Class 3b Δ LERF from each hazard/contributor (e.g., internal events, seismic, fire, other external hazards, steel liner corrosion, and containment accident pressure).

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