

NRR-PMDAPEm Resource

From: Rankin, Jennivine
Sent: Tuesday, May 02, 2017 3:16 PM
To: Schrage, John L:(GenCo-Nuc)
Subject: Clinton Power Station, Unit 1 - Request for Additional Information Regarding the Permanent Extension of Leak Rate Testing (CAC No. MF7290)
Attachments: FINAL REQUEST FOR ADDITIONAL INFORMATION.docx

Mr. Schrage,

By letter dated January 25, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16025A182), as supplemented by letters dated March 31, 2016 (ADAMS Accession No. ML16091A077) and March 2, 2017 (ADAMS Accession No. ML17062A584), Exelon Generation Company, LLC submitted a license amendment request for Clinton Power Station, Unit 1. The proposed amendment would revise the technical specifications to reflect a permanent extension of Type "A" Integrated Leak Rate Testing and Type "C" Leak Rate testing frequencies.

The NRC staff has reviewed the information provided and determined that additional information is required in order to complete its review. A draft request for additional information (RAI) was transmitted on April 27, 2017, and a clarification call was held on May 2, 2017. As agreed upon, please submit your response to the RAI by June 2, 2017. If you wish to alter the date of your response, please contact me at (301) 415-1530.

Please treat this e-mail as formal transmittal of the RAIs.

Thanks,
Jennie

Jennie Rankin, Project Manager
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Hearing Identifier: NRR_PMDA
Email Number: 3490

Mail Envelope Properties (Jennivine.Rankin@nrc.gov20170502151500)

Subject: Clinton Power Station, Unit 1 - Request for Additional Information Regarding the Permanent Extension of Leak Rate Testing (CAC No. MF7290)
Sent Date: 5/2/2017 3:15:41 PM
Received Date: 5/2/2017 3:15:00 PM
From: Rankin, Jennivine

Created By: Jennivine.Rankin@nrc.gov

Recipients:
"Schrage, John L:(GenCo-Nuc)" <John.Schrage@exeloncorp.com>
Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	1195	5/2/2017 3:15:00 PM
FINAL REQUEST FOR ADDITIONAL INFORMATION.docx		25951

Options

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

REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS

EXTENSION OF LEAK RATE TESTING

CLINTON POWER STATION, UNIT NO. 1

DOCKET NO. 50-461

RAI 2-1

Facts & Observation (F&O) 6-8 identified that the probabilistic risk assessment (PRA) takes credit for opening doors to ensure cooling for the Emergency Core Cooling System (ECCS) pump rooms, but no formal engineering analyses was provided. In RAI 2.b, the NRC staff requested justification for the resolution of this F&O. As indicated in the F&O resolution and in the response to RAI 2.b, a computational fluid dynamics (CFD) simulation has been performed for Residual Heat Removal (RHR)-B to support the credit for opening doors. The licensee stated in the RAI response that the RHR-A pump room is judged as having similar behavior to RHR-B because the rooms are generally symmetrical in terms of dimensions. The licensee also stated that other ECCS pump rooms are comparable and provided information on the volume and heat loads for those rooms.

Based on this information some of the ECCS rooms (RHR-C, High Pressure Core Spray, and Low Pressure Core Spray) do not appear to be similar to RHR-B. These rooms have higher heat loads as well as higher heat load per unit volume than the RHR-B room. Therefore, the CFD calculation performed for RHR-B pump room cannot be considered applicable or bounding for these rooms. The RAI response also stated that a "phenomenological failure term" is included in the PRA model to represent the possibility that the rooms are dissimilar, however the assigned failure probability is not justified. As a result, the justification sought by the staff in RAI 2.b has not been provided for all ECCS rooms and F&O 6-8 appears to remain unresolved.

Justify the credit for opening doors for the remaining ECCS rooms (e.g. CFD analyses) or alternatively, provide the results of a quantitative sensitivity analysis that assesses the impact of removing the credit for opening doors of the ECCS rooms on the current application.