

January 23, 2002

Mr. Michael P. Gallagher
Director-Licensing
Exelon Corporation
200 Exelon Way
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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAI) FOR THE REVIEW OF
THE PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3

Dear Mr. Gallagher:

By letter dated July 2, 2001, Exelon Generation Company, LLC (Exelon), submitted for Nuclear Regulatory Commission (NRC) review an application, pursuant to 10 CFR Part 54, to renew the operating licenses for the Peach Bottom Atomic Power Station, Units 2 and 3. The NRC staff performed an audit on December 4 - 7, 2001, to review the scoping and screening methodology documentation that support the development of the application.

At the public exit meeting held on December 7, 2001, the NRC staff advised Exelon of its intent to issue several RAIs related to scoping and screening methodology of the application. A request for additional information is enclosed. We request that you provide your response to this RAI by February 28, 2002.

If you have any questions, please feel free to contact me at 301-415-1146.

Sincerely,

/RA/

Raj K. Anand, Project Manager
License Renewal and Environmental Impacts Programs
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosure: As stated

cc w/encl: See next page

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Exelon Generation Company, LLC (Exelon)
License Renewal Application (LRA)
Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3

Request for Additional Information

1. Section 2.1.2 of the PBAPS LRA, "Scoping Methodology"

RAI 2.1.2-1 Scoping and Screening Methodology

As discussed and understood during the scoping and screening methodology audit performed December 4-7, 2001, describe in detail the scoping and screening process, as shown in Figure 2.1-1 of the PBAPS LRA, with respect to mechanical, structural and electrical disciplines.

RAI 2.1.2-2 System Realignment

As discussed and understood during the scoping and screening methodology audit performed December 4-7, 2001, describe the "system realignment" process and the rationale for its use. Ensure that the response includes a discussion of how the realignment of components is consistent with the criteria described in implementing plan PLI-001, the LRA, LRC-14, and the five cases discussed during the audit.

RAI 2.1.2-3 System and Structure Scoping Criteria (Seismic II/I)

An applicant needs to consider nonsafety-related (NSR) piping systems which are not connected to safety-related (SR) piping, but have a spatial relationship such that their failure could adversely impact on the performance of an intended safety function. For this piping system configuration, the applicant has two options when performing its scoping evaluation; a mitigative option or a preventive option. With respect to the mitigative approach, the applicant must demonstrate that plant mitigative features (e.g., pipe whip restraints, jet impingement shields, spray and drip shields, seismic supports, flood barriers, etc.) are provided which protect SR structures, systems and components (SSCs) from a failure of NSR piping segments. When evaluating the failure modes of NSR piping segments and the associated consequences, age-related degradation must be considered. The staff notes that pipe failure evaluations typically do not consider age-related degradation when determining pipe failure locations. Rather, pipe failure locations are normally postulated based on high stress. Industry operating experience has shown that age-related pipe failures can, and do, occur at locations other than the high-stress locations postulated in most pipe failure analyses. Therefore, to utilize the mitigative option, an applicant should demonstrate that the mitigating devices are adequate to protect SR SSCs from failures of NSR piping segments at any location where age-related degradation is plausible. If this level of protection can be demonstrated, then only the mitigative features need to be included within the scope of license renewal, and the piping segments need not be included within the scope.

However, if an applicant cannot demonstrate that the mitigative features are adequate to protect safety-related SSCs from the consequences of non-safety-related pipe failures, then the

applicant should utilize the preventive option, which requires that the entire non-safety-related piping system be brought into the scope of license renewal and an AMR be performed on the components within the piping system. Finally, an applicant may determine that in order to ensure adequate protection of the SR SSC, a combination of mitigative features and NSR SSCs must be brought within scope. Regardless, it is incumbent upon the applicant to provide adequate justification for the approach taken with respect to scoping of NSR SSCs in accordance with the Rule. Therefore the applicant is requested to identify which option is used for NSR piping systems which are not connected to SR piping, but have a spatial relationship such that their failure could adversely impact on the performance of an intended safety function. For each NSR piping system which would normally be included within the scope of license renewal, but is excluded because mitigative features have been credited for protecting SR SSCs from the failure of the NSR piping system, please identify the following:

- a. the mitigative feature(s) that is credited for protection.
- b. the hazard (e.g., failure mechanisms and postulated failure locations) for which the mitigative feature(s) is providing protection.
- c. a summary discussion (including references, such as reports, analyses, calculations, etc.) of the basis for the conclusion that the mitigative feature(s) is adequate to protect SR SSCs.

RAI 2.1.2-4

Given the methodology used to identify piping systems that meet the 54.4(a)(2) scoping criterion, there may be other non-safety-related systems, structures or components (NSR SSCs) which should be included within the scope of license renewal. For these other NSR SSCs an applicant can exercise the mitigative option, the preventive option, or a combination, in order to address the scoping issue. For each NSR SSC identified as meeting the 54.4(a)(2) scoping criterion, list which option or combination of options is being credited. For those NSR SSCs which exercise the mitigative option further indicate:

- a. the mitigative feature(s) that is credited for protection,
- b. the hazard (e.g., failure mechanisms and postulated failure locations) for which the mitigative feature(s) is providing protection, and
- c. a summary discussion (including references, such as reports, analyses, calculations, etc.) of the basis for the conclusion that the mitigative feature(s) is adequate to protect safety-related SSCs.

2. Appendix A of the PBAPS LRA - Updated Final Safety Analysis Report Supplement

RAI A.2-1 Quality Assurance for Aging Management Programs

Section A.2, "Quality Assurance for Aging Management Programs," of the NRC's Standard Review Plan for License Renewal (SRP-LR), states a license renewal applicant to demonstrate

that the effects of aging on structures and components subject to an aging management review will be adequately managed to ensure that their intended functions will be maintained consistent with the current licensing basis of the facility for the period of extended operation. Consistent with this approach, the applicant's aging management programs should contain the attributes of corrective action, confirmation process, and administrative controls in order to ensure proper management of the aging programs.

However, Appendix A, "Updated Final Safety Analysis Report Supplement," of the PBAPS LRA, does not provide a description of how the Quality Assurance Program (QAP) specifically addresses these attributes. Therefore, the applicant is requested to provide a description of how the QAP specifically addresses these attributes for the aging management programs during the period of extended operation.

3. Appendix B of the PBAPS LRA

RAI B.1-1 Aging Management Activities

Appendix B to the LRA provides an aging management activity summary for each unique structure, component, or commodity group determined to require aging management during the period of extended operation. Section B.1 of the LRA includes a description of each attribute associated with the described Aging Management Activities. However, the LRA does not provide a description of each of these attributes necessary to ensure consistency between the SRP definitions and those applied by the applicant. Also, Appendix B does not provide a description of how the QAP specifically addresses corrective action, confirmation process, and administrative controls for which credit is being sought. Therefore, based on the staff's review of Appendix B, Section B.1, of the PBAPS LRA, the applicant is requested to provide:

- a. A general description of how the definitions established for each of the 10 attributes identified within Section B.1, "Existing Aging Management Activities," is consistent with the definitions described in Section A.1, "Aging Management Review - Generic," Table A.1-1, "Elements of an Aging Management Program for License Renewal," of the SRP-LR.
- b. A description of how the Exelon 10 CFR 50, Appendix B, QAP program specifically addresses corrective action, confirmation process, and administrative controls for the aging management programs at the PBAPS during the period of extended operation.
- c. A description of how the Exelon 10 CFR 50, Appendix B, QAP is consistent with the summary in Section A.2 of the SRP-LR and how it addresses the implementation of corrective action, confirmation process, and administrative controls for both safety-related and non-safety-related structures, systems, and components that are within the scope of license renewal.

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