



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 18, 2008

Mr. Charles G. Pardee
President and Chief Nuclear Officer
Exelon Generation Company, LLC
200 Exelon Way
Kennett Square, PA 19348

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 - REQUEST
FOR ADDITIONAL INFORMATION REGARDING RELIEF REQUEST I4R-44
(TAC NOS. MD8296 AND MD8297)

Dear Mr. Pardee:

By letter to the Nuclear Regulatory Commission (NRC) dated February 29, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML08064058), as supplemented by letter dated May 13, 2008, (ADAMS Accession No. ML08135077) Exelon Generation Company, LLC (the licensee), submitted a Request for Alternative I4R-44. The request for alternative I4R-44 proposes a risk-informed selection and examination program as an alternative to a portion of its current inservice inspection program for Peach Bottom Atomic Power Station, Units 2 and 3, on the basis that the alternative provides an acceptable level of quality and safety. The NRC staff has reviewed the request submitted by the licensee and has identified a need for additional information as set forth in the Enclosure.

The draft questions were sent to Mr. Thomas Loomis, from your staff, to ensure that the questions were understandable, the regulatory basis for the question was clear, and to determine if the information was previously docketed. On December 12, 2008, Mr. Loomis indicated that the licensee will submit a response by January 9, 2009. If you have any questions, please contact John Hughey at (301) 415-3204.

Sincerely,

A handwritten signature in black ink that reads "John D. Hughey".

John D. Hughey, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosure: Request for Additional
Information

cc: Distribution via ListServ

REQUEST FOR ADDITIONAL INFORMATION

REGARDING RELIEF REQUEST I4R-44

PEACH BOTTOM ATOMIC POWER STATION, UNITS NO. 2 AND 3

DOCKET NOS. 50-277 AND 50-278

By letter to the Nuclear Regulatory Commission (NRC) dated February 29, 2008,¹ as supplemented by letter dated May 13, 2008,² Exelon Generation Company, LLC (the licensee), submitted a Request for Alternative I4R-44. The request for alternative I4R-44 proposes a risk-informed (RI) selection and examination program as an alternative to a portion of its current inservice inspection (ISI) program for Peach Bottom Atomic Power Station, Units 2 and 3, on the basis that the alternative provides an acceptable level of quality and safety. Exelon requests to implement an RI-ISI program based on the "Revised Risk-Informed Inservice Inspection Evaluation Procedure."³

In 2004, the licensee evaluated their probabilistic risk assessment (PRA) against DG-1122,⁴ which was the draft version of Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," Revision 1, January 2007. Appendix A in DG-1122 provided the NRC staff's positions on the supporting requirements in the American Society of Mechanical Engineers (ASME) RA-S-2002.⁵ After DG-1122 was issued, two updates to the ASME standard were issued, ASME RA-Sa-2003,⁶ followed by the current version, ASME RA-Sb-2005.⁷ Appendix A in RG 1.200 provides the NRC staff's position on the supporting requirements in ASME RA-Sb-2005. RG-1.200 states that, "If it is demonstrated that the parts of a PRA that are used to support an application comply with the ASME standard, when supplemented to account for the staff's regulatory positions contained in Appendix A, it is considered that the PRA is adequate to support that risk-informed application."

Following a PRA update in 2006, Exelon assessed the results of their 2004 review relative to the supporting requirements in ASME RA-Sb-2005. The licensee further explained that this final assessment also considered NRC clarifications issued July 27, 2007.⁸ However, the July 27, 2007, NRC document only provides a small number of clarifications to numerous NRC positions that are described in RG 1.200.

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML08064058

² ADAMS Accession No. ML08135077

³ EPRI TR-112657, "Revised Risk-Informed Inservice Inspection Evaluation Procedure, Electric Power Research Institute, Revision B-A, December 1999

⁴ Draft Regulatory Guide DG-1122, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," USNRC, November 2002

⁵ ASME RA-S-2002, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications," American Society of Mechanical Engineers, April 5, 2002.

⁶ ASME RA-Sa-2003, "Addenda to ASME RA-S-2002, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications," American Society of Mechanical Engineers, December 5, 2003.

⁷ ASME RA-Sb-2005, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications," American Society of Mechanical Engineers, December 2005.

⁸ "Clarification to Regulatory Guide 1.200, Revision 1," ADAMS Accession Number ML071940253.

The NRC has reviewed Exelon's submittal and has determined that additional information described below is needed to complete the review. The following question references information provided in the attachment to your May 13, 2008, letter.

RAI-01: Based on the information provided, it appears that the licensee's PRA has been evaluated against ASME RA-Sb-2005, but not against the staff's regulatory positions contained in Appendix A of RG 1.200. In order for the NRC staff to conclude that your PRA has been evaluated in accordance with RG 1.200, the staff positions in Appendix A need to be incorporated into your evaluation or these positions should be evaluated for impact (or lack of impact) on risk-informed inservice inspection. Please clarify how the licensee's evaluation process complies with RG 1.200 or provide an equivalent alternative.

The first paragraph on page 4 of 7 of relief request I4R-44 states that, "The Consequence Evaluation, Degradation Mechanism, Risk Ranking, and Element Selection steps encompass the complete living program process applied under the Peach Bottom Atomic Power Station RI-ISI program."

RAI-02: Please provide a description of what was done to implement the above living RI-ISI program commitment in preparation for the request to extend this program into the fourth 10-year ISI interval. The description should specify those portions of the RI-ISI program process steps that were re-performed (e.g., scope definition, segment definition, consequence evaluation, failure probability estimation, element selection, etc.), and/or explain and justify what was done in lieu of re-performing those steps that were not re-performed.

RAI-03: Are the inspection locations in the RI-ISI program that have been developed for the fourth interval the same locations as those in the program approved in the NRC staff's August 27, 2003, safety evaluation for the Peach Bottom third testing interval?⁹ If not, please summarize the changes to the program and what caused those changes.

Paragraph 5.0(b) on page 4 of 7 of relief request I4R-44 discusses the degradation-specific inspection requirements and examination methods and discusses the guidance of both EPRI TR-112657 and Code Case N-578-1.¹⁰

RAI-04: Please clarify which guidance was used to determine the examination methods and the examination volumes to be used for specific degradation mechanisms.

RAI-05: Provide information regarding examinations/system/components/ degradation mechanisms/class, etc. The information should show a summary of the changes in inspections from the Section XI program and changes from the previous RI-ISI program to the proposed RI-ISI program. Similar information was provided in Tables 2 and 3 of the Byron Station submittal dated September 7, 2007.¹¹

⁹ ADAMS Accession Number ML032250066

¹⁰ Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method B, Section XI, Division 1, March 28, 2000

¹¹ ADAMS Accession No. ML072530024.

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Sincerely,

/ra/

John D. Hughey, Project Manager
Plant Licensing Branch I-2
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ADAMS Accession Number: ML083440545

*by memo dated

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