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Advisory Committee on Reactor Safeguards

Peach Bottom Atomic Power Station Units 2 and 3

Subsequent License Renewal

December 4, 2019

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Presentation Outline

- **Overview of Safety Review of Peach Bottom SLRA**
- **SER Section 2, Scoping and Screening Review**
- **SER Section 3, Aging Management Review**
- **SER Section 4, Time-Limited Aging Analyses**
- **Closure of Confirmatory Item**
- **SLRA Review Conclusion**
- **Region I Initial License Renewal Inspection and Plant Material Conditions and Conclusion**
- **Summary Conclusion**

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Overview of Safety Review of Peach Bottom SLRA

Unit	Initial License	Initial License Renewal Application	Renewed License	Expiration Date	Subsequent License Renewal Application
2	10/25/1973	07/02/2001	05/07/2003	08/08/2033	07/10/2018
3	07/02/1974	07/02/2001	05/07/2003	07/02/2034	07/10/2018

- Application Submitted – July 10, 2018
- Acceptance Determination – September 6, 2018
- Safety Evaluation Report with Confirmatory Item – October 7, 2019
- Safety Evaluation Report – November 19, 2019

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SLRA Audits and Inspections

	Dates	Location
Operating Experience Audit	September 17-27, 2018	Rockville, MD
In-office Audit	November 13, 2018 - April 29, 2019	Rockville, MD

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SER Overview

- **SER with Confirmatory Item Issued October 7, 2019**
  - Confirmatory Item 3.0.3.2.3-1 on BWR Vessel Internals
- **Safety Evaluation Report issued November 19, 2019**
  - Confirmatory Item 3.0.3.2.3-1 closed
- **Requests for Additional Information (RAIs)**
  - 48 RAIs issued, 4 of which were follow-up RAIs

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SER Section 2

Structures and Components Subject to Aging Management Review (AMR)

- Section 2.1 Scoping and Screening Methodology
- Section 2.2 Plant Level Scoping Results
- Sections 2.3, 2.4, and 2.5 Scoping and Screening Results

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SER Section 3

Aging Management Review (AMR)

- Section 3.0 Use of the Generic Aging Lessons Learned Report
- Section 3.1 Reactor Vessel, Internals, and Reactor Coolant System
- Section 3.2 Engineered Safety Features
- Section 3.3 Auxiliary Systems
- Section 3.4 Steam and Power Conversion Systems
- Section 3.5 Containment, Structures, and Component Supports
- Section 3.6 Electrical and Instrumentation and Control Commodities

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SER Section 3

3.0.3 - Aging Management Programs (AMPs)

SLRA - Original Disposition of AMPs	SER - Final Disposition of AMPs
• 11 new GALL programs – 8 consistent – 3 consistent with exceptions • 35 existing GALL programs - 8 consistent - 27 consistent with enhancements/exceptions • 1 plant specific with enhancement	• 11 new GALL programs – 8 consistent – 3 consistent with exceptions • 35 existing GALL programs - 8 consistent - 27 consistent with enhancements/exceptions • 1 plant specific with enhancement

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SER Section 4

Time-Limited Aging Analyses (TLAAs)

- 4.1 Identification of TLAAs
- 4.2 Reactor Vessel and Internals Neutron Embrittlement Analyses
- 4.3 Metal Fatigue Analyses
- 4.4 Environmental Qualification of Electric Equipment
- 4.5 Concrete Containment Tendon Prestress Analysis
- 4.6 Primary Containment Fatigue Analysis
- 4.7 Other Plant-Specific TLAAs

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Closure of Confirmatory Item 3.0.3.2.3-1 BWR Vessel Internals

Issue SLRA, AMP B.2.1.7 “BWR Vessel Internals” proposed and enhancement to either:

- install core plate wedges or
- submit for NRC approval an inspection plan for the core plate rim hold-down bolts to mitigate stress corrosion cracking.

Resolution Applicant revised the AMP B.2.1.7 enhancement to be in accordance with BWRVIP-25, Revision 1 to:

- install wedges or
- inspect core plate rim hold-down bolts, or
- demonstrate instead via analysis that the installation of wedges and inspections of the core plate rim hold-down bolts are not required.

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SLRA Review Conclusion

On the basis of its review of the SLRA and the resolution of the confirmatory item, the staff determined that the requirements of 10 CFR 54.29(a) have been met for the subsequent license renewal of Peach Bottom Atomic Power Station Units 2 and 3.

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Region I Initial License Renewal Inspections

- Five to ten years following the entry into the period of extended operation the Region conducts one additional license renewal team inspection—IP 71003 Phase 4.

- The team examines a sample of AMPs to verify the effects of aging were being managed effectively to ensure structures, systems, and components in the scope of these programs maintained the ability to perform their intended functions.

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Region I AMP Inspections

The Peach Bottom IP 71003 Phase 4 initial license renewal inspection was performed in November 2018 on both Units 2 and 3.

- Flow Accelerated Corrosion Program (existing)
- Maintenance Rule Structural Monitoring Program (existing)
- Ventilation System Inspection and Testing Activities (enhanced)
- Outdoor, Buried and Submerged Component Inspection Activities (enhanced)
- Fire Protection Activities (enhanced)
- In-accessible Medium Voltage Cables not subject to 10 CFR 50.49 Environmental Qualification Requirements (New)

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Inspection of Plant Material Condition

- Reactor Oversight Process performance indicators and findings indicate plant material condition meets regulatory requirements.
- Resident Inspector routine plant walkdowns support this conclusion.
- Resident and Region based inspectors continue to inspect and assess the licensee performance to manage the effects of aging through the baseline inspection program.

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NRC Inspection Results

The inspectors found the licensee's aging management programs were being effectively implemented in accordance with the facility's renewed license. The NRC will continue to monitor AMPs using the baseline Reactor Oversight Process.

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Summary Conclusion

- The staff has completed its presentation and conclusions on the safety review of the Peach Bottom SLRA and the Region I conclusions on inspections and plant material conditions.

- Additional questions