

# Peach Bottom Atomic Power Station 2 & 3 Second License Renewal Application



Pre-submittal Meeting  
January 18, 2018



**Exelon Generation.**

# Agenda

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Introductions: *Mike Gallagher, VP License Renewal & Decommissioning*

Background: *Mike Gallagher*

Part 54 Safety Application Approach : *Paul Weyhmuller, Peach Bottom Project Tech Lead*

Discussion Topics/Lessons Learned: *All*

Project Management: *John Hufnagel, Peach Bottom Project Licensing Lead*

Closing Remarks: *Mike Gallagher*

# Site Information



# Background

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- First License Renewal Application submitted July 2, 2001
  - ✓ Approved May 7, 2003
  - ✓ IP 71003 Unit 2 completed January 31, 2013
  - ✓ IP 71003 Unit 3 completed March 31, 2014
  - ✓ Entered PEO 2013 (Unit 2) and 2014 (Unit 3)
- Well run and maintained
  - ✓ 12 years without an automatic scram
  - ✓ Over \$1.3 billion on capital improvements 2012 -2016
  - ✓ Unit 3 completed 731 days of continuous operation

## Background - Power Uprate History

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Peach Bottom Authorized Power History	Unit 2	Unit 3
Initial License, 3293 MWt	10/25/1973	07/02/1974
5% Uprate, 3458 MWt	10/18/1994	07/18/1995
1.62% Uprate, 3514 MWt	11/22/2002	11/22/2002
Extended Power Uprate, 3951 MWt	08/25/2014	08/25/2014
Measurement Uncertainty Recapture, 4016 MWt	11/15/2017	11/15/2017
Current License Expiration Date	08/08/2033	07/02/2034

# Background - Part 54 Safety Application Approach

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Lessons learned from previous Exelon and industry license renewal projects are utilized in the PBAPS SLRA Project

- Exelon has extensive aging management experience
  - ✓ 22 of 23 units have renewed operating licenses
  - ✓ 13 units are operating in the PEO
- Exelon has held leadership positions and participates in NEI and EPRI initiatives that prepared the industry for Subsequent License Renewal & Long Term Operations
- Exelon participated through NEI in providing comments to the staff on GALL/SRP - SLR

Current NRC Expectations and SRP Guidance

- Exelon reviewed RAIs that have been issued to recent license renewal applicants to ensure consistency with current NRC expectations and SRP guidance
  - ✓ Includes lessons learned from River Bend acceptance review

## Part 54 Safety Application Approach

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- Safety portion format is based on NUREG -2192 (SRP-SLR), NEI 17-01, and Reg. Guide 1.188 (pending)
- Comprehensive Scoping & Screening was performed
- Aging Management Reviews
  - ✓ Highly consistent : >98% A through E notes (approx. 6400 line items)
  - ✓ No new aging effects since first license renewal
- Aging Management Programs
  - ✓ Goal is to maximize consistency with GALL-SLR
  - ✓ Includes Aging Management Effectiveness Review of First LR programs
- TLAAs
  - ✓ Addressed First License Renewal TLAAs
  - ✓ Extensive review for additional TLAAs
- Review of SLRA
  - ✓ Internal consistency checks being performed (e.g., enhancements, aging effects)
  - ✓ Industry Peer review will be performed



# GALL-SLR Consistency and Commitments

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- 47 AMP License Renewal Commitments (preliminarily)
  - ✓ UFSAR Supplement (Appendix A of the SLRA)
  - ✓ Managed by Exelon Commitment Tracking program based on Nuclear Energy Institute 99-04, “Guidelines for Managing NRC Commitment Changes”

		AMPs Consistent with GALL	AMPs Consistent with Enhancement	AMPs with Exception without Enhancement	AMPs with Exception and Enhancement	Plant Specific AMPs
Existing	36	7	20	2	6	1
New	11	8	0	3	0	0
Total AMPs	47					



## Discussion Topics/Lessons Learned

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- GAP Analysis for Reactor Internals: Section 3.1.2.2.12 for BWR Internals
- Bases for projecting neutron fluence values for RPV and RVI to the end of a proposed subsequent period of extended operation
- Are there changes in methods of analysis since first license renewal?
  - ✓ RPV Fluence Methodology consistent with CLB
  - ✓ Environmental qualification of electrical equipment consistent with CLB
  - ✓ Fatigue Analysis consistent with CLB
  - ✓ EAF analysis consistent with GALL-SLR guidance
- EAF Screening methodology for limiting Class 1 locations
- Any changes in Technical Specifications anticipated for SLR?
- Is Noble Metal Chemical Addition or Hydrogen Water Chemistry credited in reducing ISI inspection requirements?
  - ✓ Will BWRVIP-62 Rev. 1 be used for BWR Vessel and Internals?
- Concrete degradation including irradiation effects

# Discussion Topics/Lessons Learned

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- Cable and Electrical AMPs
- BWRVIP Integrated Surveillance Program (ISP)
  - ✓ BWRVIP-135
  - ✓ BWRVIP-86 Rev. 1-A
- Use of the BWRVIP-74 App. B generic equivalent margins analysis methodology for Upper Shelf Energy (USE) TLAA
- Any new aging effects identified for SLR?
- Westinghouse Steam Dryer aging management
- Use of SLRA Appendix C
- Relationship between 1<sup>st</sup> and 2<sup>nd</sup> LR UFSAR supplements

# Project Management

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- Exelon plans to provide electronic SLRA submittal, web-ready CD and reviewers' aid information including: Reviewer version CDs including SLRA, ER, boundary drawings, UFSAR, and FPP, with links
- SLRA and boundary drawing hard copies will be provided
- Exelon will utilize Sciencetech eDocs portal to make supporting documents available upon NRC completion of SLRA acceptance review
- Frequent project calls between the Exelon Licensing Lead and NRC PM
- Operating Experience Audit in Rockville, MD
  - ✓ Exelon will support with utility laptops, spreadsheet data and connection to Station CAP database
- In-Office and On-Site Audit Support
  - ✓ Exelon will work with NRC PM to establish and manage remote breakout session schedules
  - ✓ Exelon will track NRC audit questions, requests, and the responses in a database
  - ✓ Coordination of plant walkdowns and other on-site activities
- RAI Responses
  - ✓ Exelon will meet NRC response schedules

## Closing Remarks

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- The Peach Bottom SLR application will be consistent with GALL-SLR and GEIS to the greatest extent possible
- Exelon will submit a high quality application that can support an 18 month staff review
  - ✓ Recent industry RAIs addressed in the SLR application
  - ✓ Timely RAI responses
  - ✓ Frequent NRC interface
- The Peach Bottom SLR application is on track to be submitted to the NRC in 3<sup>rd</sup> quarter 2018

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# Questions?