Dresden Nuclear Power Station
Subsequent License Renewal Application

Pre-Submittal Meeting
June 28, 2023

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Agenda

- Introductions
- General Plant Information
- 10 CFR Part 54 Safety Application Approach
  - Scoping and Screening
  - Aging Management Review
  - Aging Management Programs
  - TLAA and Exemption Identification
  - Operating Experience
- Lessons Learned/Discussion Topics
- Project Management
- Schedule and Closing Remarks
- Questions and Answers

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Introductions

Speakers

Chris Wilson – Director, License Renewal

Casey Muggleston – License Renewal Engineering Manager

Participants

Dennis Flores – LR Site Lead

Iba Ello-Fletcher – Licensing Lead

John Hilditch – Project Manager

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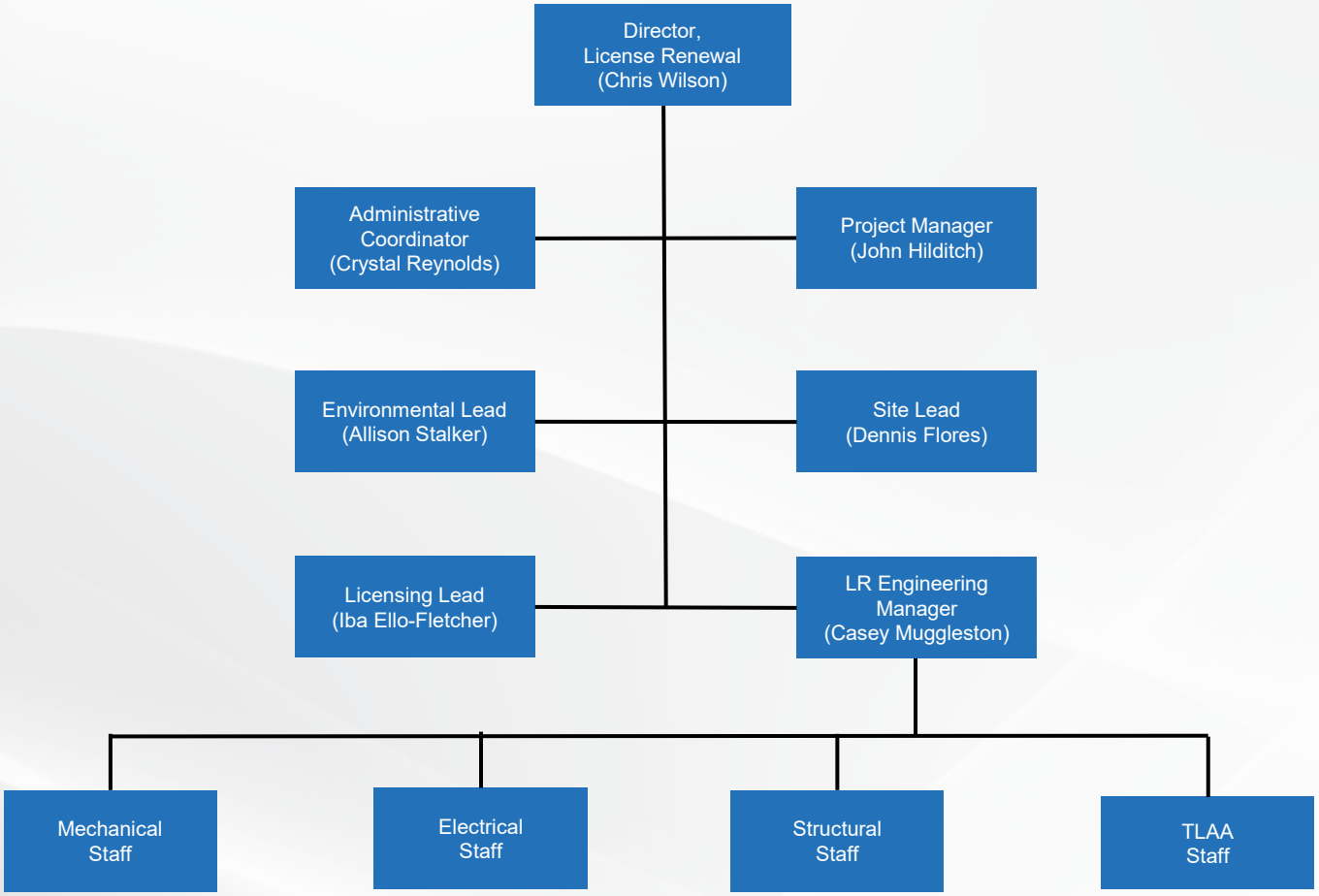
Dresden Nuclear Power Station SLR Project Team



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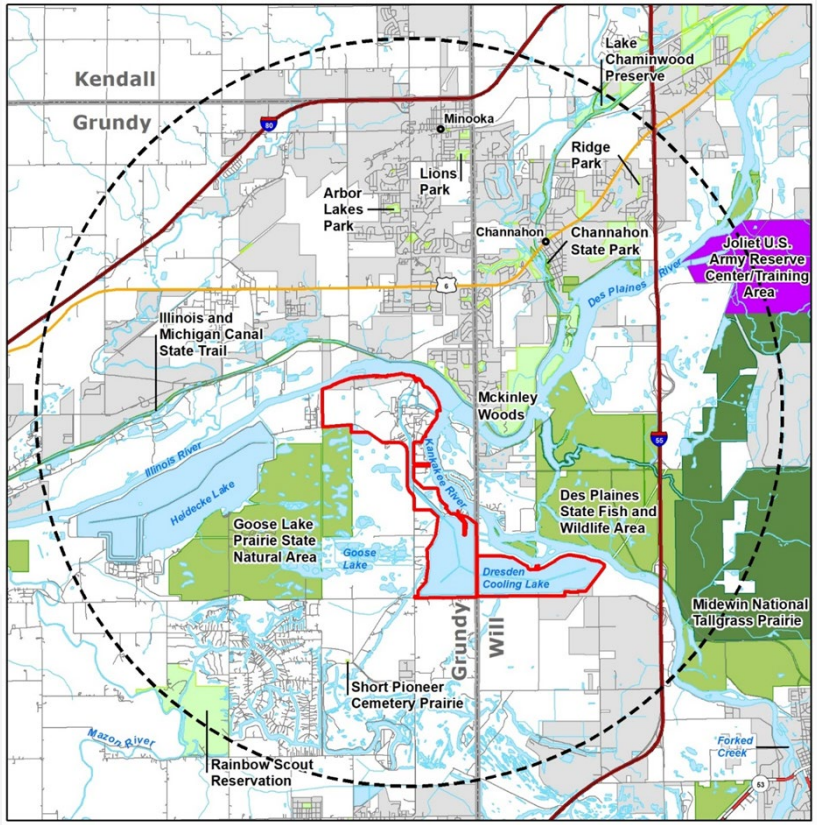
General Plant Information

Dresden Nuclear Power Station (DNPS)

- A three-unit BWR plant:
  - Unit 1 (GE BWR-1) was officially retired on August 31, 1984, but its major structures are still present and intact. Placed in a safe storage condition (SAFSTOR).
  - Unit 2 (GE BWR-3/Mark I Containment) is located on the site directly west of and adjacent to Unit 1.
  - Unit 3 (GE BWR-3/Mark I Containment) is located on the site directly west of and adjacent to Unit 2
- The site is located northeast of Morris in Grundy County, Illinois.



General Plant Information

Power Uprate History

- Current rated core thermal power of 2957 MWt for each unit (Unit 2 and Unit 3).
  - Original licensed core thermal power of 2527 MWt.
  - Extended Power Uprate approved in 2001 (Amendment Nos. 191 (Unit 2) & 185 (Unit 3), approximately 17% Uprate)

- Current gross electrical output of 1003 Mwe for each unit (Unit 2 and Unit 3), for a total of 2006 Mwe.

Overview of Initial License Renewal

- Initial License Renewal Application was submitted on January 3, 2003 and approved on October 28, 2004. It was submitted as a combined application with Quad Cities Nuclear Power station. DNPS SLR will be submitted independently.

- Unit 2 entered PEO on December 22, 2009 and Unit 3 entered PEO on January 12, 2011

- Renewed Operating Licenses expire on December 22, 2029 for Unit 2, and on January 12, 2031 for Unit 3.

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General Plant Information

Major Plant Structures

1. Unit 1 Reactor Building
2. Unit 1 Turbine Building
3. Unit 2 Turbine Building
4. Unit 3 Turbine Building
5. Unit 2 Reactor Building
6. Unit 3 Reactor Building
7. Administrative Building
8. U3 HPCI & U2/3 Diesel Generator Building
9. Unit 2/3 Cribhouse
10. 138 kV Switchyard
11. Unit 1 ISFSI Pad
12. Unit 2/3 ISFSI Pad
13. Station Blackout Building

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10 CFR Part 54 Safety Application Approach

Regulatory Guidance

- The Subsequent License Renewal Application (SLRA) format and content is based on:
  - **NUREG-2192**, "Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants," Revision 0
  - **NUREG-2191**, "Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report," Revision 0
  - **Regulatory Guide 1.188**, "Standard Format and Content for Applications To Renew Nuclear Power Plant Operating Licenses," Revision 2
  - **SLR Interim Staff Guidance (ISGs)**

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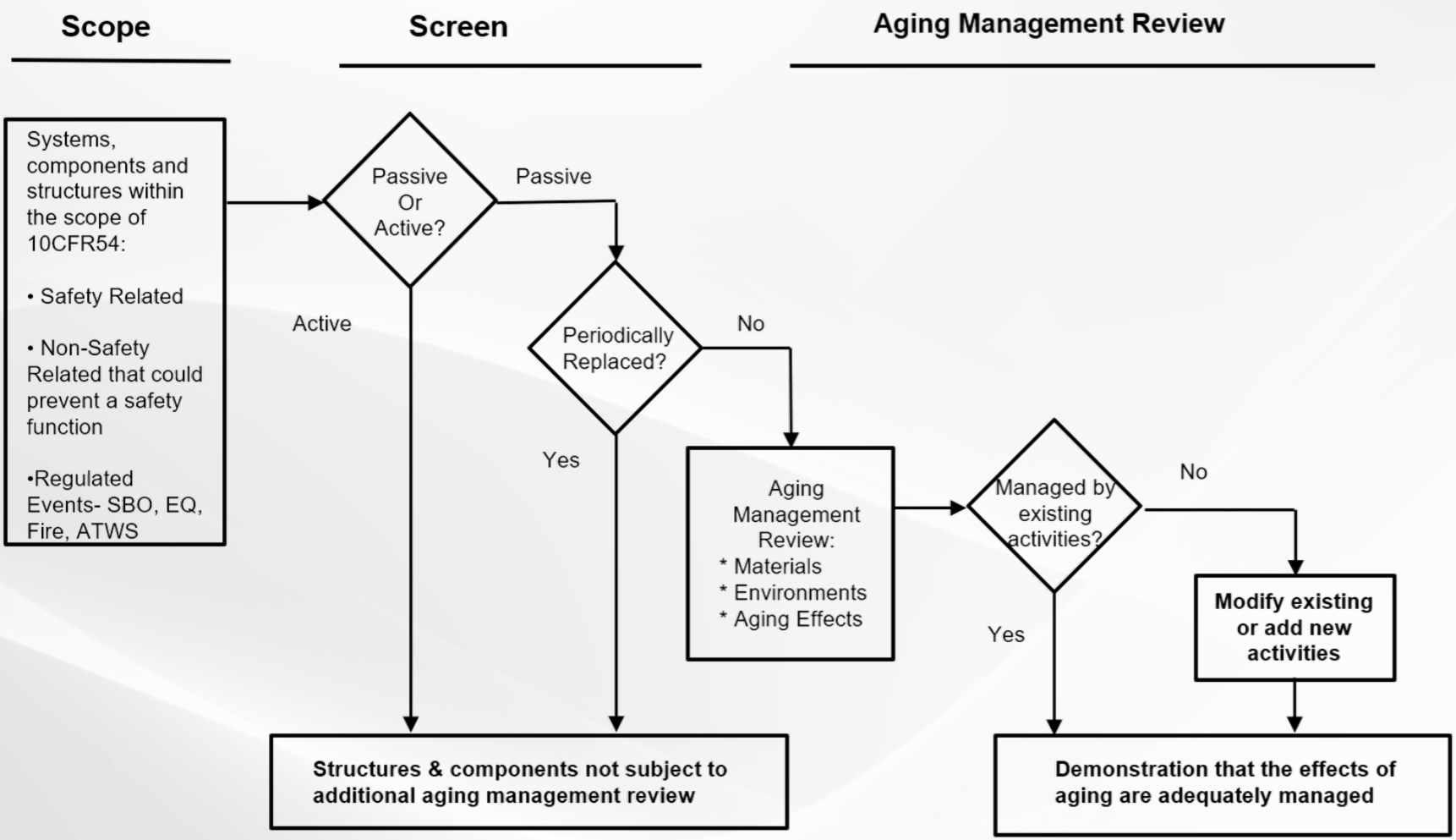
10 CFR Part 54 Safety Application Approach



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10 CFR Part 54 Safety Application Approach

- Utilized NEI 17-01, “Industry Guideline for Implementing the Requirements of 10 CFR Part 54 for Subsequent License Renewal,” Revision 0
- Comprehensive Scoping & Screening was performed
- Aging Management Reviews (AMRs)
  - Identification of Potential Aging Effects
  - Identification of Aging Effects Requiring Management
  - Review of Operating and Maintenance History
  - Identification of Aging Management Programs
- Aging Management Programs (AMPs)
  - Goal is to maximize consistency with GALL-SLR
- Time Limited Aging Analyses (TLAAs)
  - Keyword search of licensing basis documents to identify potential TLAAs
  - Comparison of the Dresden identified potential TLAAs to SLR guidance documents
  - Comparison of the Dresden identified potential TLAAs to other SLR applicants
  - Review of applicable BWRVIP documents
- Operating Experience
  - Initial review period: 01/01/2013 through 12/12/2022; will perform gap review prior to submittal.
  - No new aging effects identified to date

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10 CFR Part 54 Safety Application Approach

AMPs applicable to Dresden Nuclear Power Station(1)

- DNPS will have 47 AMPs
  - 35 are existing programs
  - 24 existing programs will be enhanced for SLR purposes
  - 12 are new programs
  - No site-specific AMPs

- **AMPs Not Applicable to Dresden Nuclear Power Station(1)** (does not include PWR specific AMPs)
  - X.S1, Concrete Containment Unbonded Tendon Prestress
  - XI.M22, Boraflex Monitoring
  - XI.S2, ASME Section XI Subsection IWL
  - XI.E5, Fuse Holders

(1) – Preliminary Information

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10 CFR Part 54 Safety Application Approach

Preliminary AMP results:

		AMPs Consistent with GALL-SLR	AMPs with Enhancements	AMPs with Exception without Enhancement	AMPs with Exception and Enhancement	Plant Specific AMPs
Existing	35	9	18	2	6	0
New	12	9	N/A	3	N/A	0
Total AMPs	47					

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Lessons Learned

- Lessons learned from previous Constellation and industry license renewal projects are being utilized in the DNPS SLRA Project
  - Constellation has extensive aging management experience
    - 20 of 21 units have renewed operating licenses
    - 12 units are operating in the period of extended operation
  - Constellation participates in NEI and EPRI initiatives related to License Renewal & Long-Term Operations
  - The Constellation DNPS SLRA Project Team consists of experienced technical personnel

- Current NRC Expectations and Guidance
  - Constellation reviews Breakout Questions, RAIs/RCIs, and Supplements associated with recent license renewal applications to ensure consistency with current NRC expectations and SRP guidance

- An Industry Peer Review of the SLRA will be performed

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Project Management

- Constellation plans to submit the SLRA, including the Environmental Report (ER), via the NRC Electronic Information Exchange (EIE)
- Constellation intends to utilize the Scientech eDocs portal to support NRC review. Documents such as:
  - SLRA, ER, boundary drawings, UFSAR, and FPP will be available on the eDocs portal.
- Constellation Licensing Lead will coordinate with the NRC PM
- Audit Support
  - Constellation will work with the NRC PM to establish and manage the schedules
  - Constellation will track NRC audit questions, requests, and the responses in a database
  - Site lead will coordinate plant walkdowns and other on-site activities
- RAI Responses
  - Constellation will submit timely responses to NRC requests for additional information

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Schedule and Closing Remarks

- The DNPS SLR application will be consistent with GALL-SLR to the greatest extent possible
- The DNPS SLR application will be consistent with industry practices and lessons learned from recent LRs/SLRs to meet NRC requirements
- Constellation will submit a high-quality application that can support an efficient staff review
  - Recent industry RAIs will be addressed in the SLR application
  - Timely RAI responses
  - Frequent NRC interface
- The DNPS SLR application is on track to be submitted on the target date of April 17, 2024

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Questions

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