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Advisory Committee on Reactor Safeguards (ACRS) License Renewal Full Committee

James A. Fitzpatrick Nuclear Power Plant License Renewal Safety Evaluation Report

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Introduction

- Overview
- License Renewal Inspections
- Section 2: Scoping and Screening Review
- Section 3: Aging Management Review Results
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Overview

Recap of September 2007 sub-committee meeting

- 346 Audit Questions
- 118 RAIs Issued
- Safety Evaluation Report (SER) With Open Items was issued July 31, 2007
  - Two (2) Open Items
  - Zero (0) Confirmatory Items
  - Three (3) Standard License Conditions

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License Renewal Inspections

Glenn Meyer

Inspection Team Leader, Region I

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Regional Inspection

- 54.4(a)(2) - non-safety SSCs whose failure could affect safety SSCs
- Spatial and Structural Interactions
- LRA Drawings and procedures reviewed
- Plant walkdowns performed
- Some components or portions of systems needed to be added to scope

Regional Inspection

- Spatial interaction
- Structural interaction
- Scoping and screening

Regional Inspection

Aging Management

- Reviewed program implementation for 22 AMPs
- Reviewed programs, evaluations, and records
  - Program procedures
  - Operational experience information
  - Corrective actions on prior plant issues
- Interviewed cognizant personnel
- Performed plant walk downs

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Regional Inspection

Aging Management

- **Aging Management Programs support conclusion that aging effects will be managed**
- **Regional Administrator's Letter To NRR Director issued January 25, 2008**

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Section 2 Conclusion

- The applicant's scoping and screening methodology consistent with the requirements of 10 CFR 54.4 and 54.21(a)(1)
- SSCs within the scope of license renewal and subject to AMR are consistent with the requirements of 10 CFR 54.4 and 54.21(a)(1)

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Section 3: Aging Management Review Results

Aging Management Programs (AMPs)

- **Total 36 AMPs**
  - **26 existing AMPs**
  - **10 new AMPs**

- **GALL Report Consistency**
  - **10 Consistent**
  - **20 Consistent with exceptions/enhancements**
  - **6 Plant Specific**

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Section 3: Aging Management Review Results

- **346 Audit Questions**
- **All Questions except two (2) were resolved**
  - **2 Questions Converted to RAIs**
  - **Fifty-five of the Questions Resulted in Revisions to the LRA**
- **25 Commitments at the End of the Audit**

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Section 3 Conclusion

- Based on its review of the AMRs and AMPs, the staff concludes that the applicant has demonstrated that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation

Section 4 - TLAAs

- **OI 4.2.1-1 – Reactor Vessel Fluence (Resolved)**

  - º New (Reg Guide 1.190-based) calculation submitted on November 5, 2007
  - º Methodology acceptable and new value is bounded by initial value

- **OI 4.3.3-1 – Environmentally-Assisted Fatigue (Resolved)**

  - º The applicant submitted Commitment #20
  - º Will comply with 10 CFR 54.21(c)(1)(iii)

Section 4 Conclusion

- TLAAs
  - 10 CFR 54.3: TLAA list adequate, as amended
  - 10 CFR 54.21(c)(1)(i): analyses remain valid for Period of Extended Operation (PEO), (ii): analyses projected to the end of PEO, and (iii): aging effects will be adequately managed for PEO
  - 10 CFR 54.21(d): Sufficient supplements to FSAR
  - 10 CFR 54.21(c)(2): No plant specific exemptions

License Conditions

- The first license condition requires the applicant to include the UFSAR supplement required by 10 CFR 54.21(d) in the next UFSAR update, as required by 10 CFR 50.71(e), following the issuance of the renewed license.
- The second license condition requires future activities identified in the UFSAR supplement to be completed prior to the period of extended operation.
- The third license condition requires that all capsules in the reactor vessel that are removed and tested meet the requirements of American Society for Testing and Materials (ASTM) E 185-82 to the extent practicable for the configuration of the specimens in the capsule. Any changes to the capsule withdrawal schedule, including spare capsules, must be approved by the staff prior to implementation. All capsules placed in storage must be maintained for future insertion. Any changes to storage requirements must be approved by the staff, as required by 10 CFR Part 50, Appendix H.

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STAFF CONCLUSION

- The staff has concluded that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB, and that any changes made to the JAFNPP CLB in order to comply with 10 CFR 54.29(a) are in accord with the Act and Commission's regulations.

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Questions

Section 3: Aging Management Review Results [backup slide]

- **Examples: Two Aging Management Programs**

  Containment Inservice Inspection Program - B.1.16.1

  Containment Leak Rate Program – B.1.8

SER 3.0.3.3.2 - Containment Inservice Inspection Program:

- Interior Torus Suppression pool area above and below the water line are inspected via IWE program during refueling outages
- Torus was drained / cleaned in 1998, identified areas of pitting
- Over 5 years performed UT and found pitted areas remain acceptable per Code requirements
- During RFO-16 (2004), UT results shown 3 pitted depths 0.019”, 0.010”, and 0.014”, below design (0.632”) – Vs 0.503” Code minimum

SER 3.0.3.1.1 - Containment Leak Rate Program:

- The Staff finds program elements consistent with the GALL Report. Provides assurance leakage through Primary containment will not exceed Allowable TS value

Section 3: Aging Management Review Results [backup slide]

- **Examples: Two Aging Management Programs**

  Containment Inservice Inspection Program
  Containment Leak Rate Program

  Consistent with the Staff Interim Guidance LR-ISG-2006-01

  No leakage identified in the vicinity of the sand cushion drain line

  Water leakage monitoring (each refueling)

  refueling seal bellows
  drywell air gap drains
  sand pocket drains
  functional checks on the alarm system

  – **The staff finds the AMPs consistent with the GALL report, will manage loss of material, an aging effect caused by corrosion of drywell and torus material**