



RIC 2012 Aging Management Programs Effectiveness Audit

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NRC Perspective on Life Beyond 60 years

- Only 9 of 71 units have entered the period of extended operation (PEO)
- Anticipate more lessons learned as number of units in PEO increase
- Review of and incorporation of operating experience into Aging Management Programs (AMPs) is **important** if subsequent renewal is to be considered a viable option
- Older plants will reach the end of first license extension period as early as 2029 (e.g., Ginna and Nine Mile Point 1)
- Requirements, guidance, and process will need to be in place by first application

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NRC Perspective on Life Beyond 60 years

NRC's ongoing efforts to address technical issues related to second 20-year license renewal (NRC activities)

- Continued evaluation of the effectiveness of GALL Aging Management Programs (AMPs) – AMP Effectiveness Audits
- Expanded materials degradation assessment (EMDA)
- Workshops with industry and international colleagues
- Relevant domestic and international operating experience

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NRC Perspective on Life Beyond 60 years

Industry must do its part . . .

- Provide evidence that AMPs are implemented, maintained effectively, and evolving based on OpE
- Resolve known technical challenges
 - Reactor pressure vessel
 - Concrete structures
 - Cables

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AMP Effectiveness Audits

Purpose

- Gain additional understanding of how AMPs have been implemented in PEO
- Review AMP's findings in PEO to determine effectiveness in identifying aging
- Look at changes and evolution of AMPs in response to inspection findings and plant-specific and industry operating experience
- Results of assessment will inform considerations for subsequent license renewal

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AMP Effectiveness Audits

Sites: Ginna & Nine Mile Point Unit 1
(PEOs in 2009)

- NRC staff attended audit at sites for 3 days
- Reviewed AMPs, original basis documents, implementing procedures, condition reports and follow-on reports
- Interviewed plant staff and AMP owners

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AMP Effectiveness Audits

Audits provided a better understanding of how AMPs are implemented:

- Assignment of AMP owners
- Implementing plant procedures
- Use of Condition Reports

Implementation practices varied between Ginna & Nine Mile Point 1

- Self-assessments of AMP effectiveness
- Assignment & training of employees

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AMP Effectiveness Audits

- Items for consideration
 - Turnovers and maintaining knowledge of AMPs will present challenges
 - Difficult to identify changes to AMPs resulting from operating experience related to aging issues
- Uncertainties to be addressed by industry for subsequent renewal
 - Continuity of knowledge for effective implementation of AMPs
 - Evidence of AMPs evolving and responding to operating experience rather than remaining static

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AMP Effectiveness Audits

- NRC staff will review data collected from audits to evaluate effectiveness of AMP implementations
- Findings will be considered along with other factors for subsequent renewal
- NRC staff will evaluate and provide industry with needs for additional audits
- NRC's resource loading for effort will depend on certainty of first application for subsequent renewal

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