



## RIC 2012 Approaching Resolution of Generic Safety Issue 191

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Tuesday, March 13, 2012

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## Status of GSI-191

- All PWRs have taken actions to improve strainer performance
  - Installed larger strainers
  - Removed insulation
  - Changed pH buffers
  - Modifications for ex-vessel downstream effects
  - Compensatory measures
- Many plants plan further modifications
- Still difficult to demonstrate compliance with large amounts of problematic material
  - ~2/3 of PWRs are nearly complete (except in-vessel)
  - Some of these are “test to success”
  - In-vessel remains open for all plants

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## SECY-10-0113

- Commission directed staff to develop closure options
- Staff provided 3 options to close GSI-191
  - (1) Maintain current approach
    - (a) Firm schedule for full spectrum of LOCAs
    - (b) Near-term schedule for smaller LOCAs, Longer-term schedule for larger LOCAs
    - (c) No firm schedule
  - (2) Risk-inform
    - (a) Expand Section 6 of SE for NEI-04-07
    - (b) New guidance based on proposed 10 CFR 50.46a
  - (3) Credit leak before break
- Staff recommended combination of Options 1(b) and 2

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### SRM-SECY-10-0113

- SRM issued December 23, 2010
- Commission approved staff recommendations
  - Options 1(b) and 2, with clarifications
- Commission reflected industry plans to:
  - Conclude testing in 2011
  - Develop path forward in mid-2012
- Prudent to complete testing before further modifications
- Commission directed staff to evaluate alternatives for closing GSI-191 (next slide)

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### SRM-SECY-10-0113 (continued) Alternatives for Closing GSI-191

- Assess technical and policy implications
  - Includes risk-informed approach to GSI-191
- Consider how to treat debris fouling as beyond-design-basis
  - 50.46a
  - No transition break size approach

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### Developments

- Industry testing continued through 2011
  - In-vessel effects
    - Generic testing (to bound all plants) showed fiber limit is 15 grams per assembly
  - Zone of influence
    - New jet model and target testing
    - Expected to show smaller zone of influence
- Other models also refined
  - Debris preparation protocol
  - Large flume testing protocol
  - Strainer bypass testing protocol
- BWR Owners Group is continuing to address lessons learned
  - In-vessel effects topical under staff review

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### Developments (cont.)

- Staff issued *Federal Register* notice seeking alternative for closing GSI-191
  - No significant new alternatives
- South Texas Risk-Informed closure of GSI-191
  - Alternative approach
  - Subject of later discussions
- In-vessel effects testing demonstrated the need to reconsider impact of debris beds on boron precipitation
  - For fiber amounts above 15 grams/assembly for currently-tested fuel types

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### Path Forward

- Staff is developing a report to the Commission that discusses closure options for GSI-191
  - Scheduled for June 2012
  - Discusses developments since December 2010
  - Acknowledges that tools are in place to support deterministic closure of GL 2004-02
  - Acknowledges that risk-informed methods may be able to support exemption approach
  - Acknowledges that site-specific strategies may be able to provide reasonable assurance of adequate mitigation
  - Recommendations: TBD

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