

# GSI-191 Status Update

Mark Richter

Senior Project Manager-Nuclear Energy Institute

10 CFR 50.46c Proposed Rule and Associated Draft Regulatory Guides Public Meeting

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# Background

- Generic Safety Issue-191 “Assessment of Debris Accumulation on PWR Sump Performance” concluded that debris could clog the containment sump strainers, leading to the loss of the emergency core cooling system and containment spray system pumps.
- The NRC issued Generic Letter 2004-02, “Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at PWRs” in September 2004, requesting that licensees address the issues raised by GSI-191. GL 2004-02 was focused on demonstrating compliance with 10 CFR 50.46.

# Resolution Paths for GSI-191

- **Option 1: Compliance with 10 CFR 50.46 Based on Approved Models**
- **Option 2: Deterministic or Risk-Informed**
  - **Option 2a: Deterministic Resolution Path**
  - **Option 2b: Full Risk-Informed Resolution Path**
- **Option 3: Different Regulatory Treatment for Suction Strainer and In-Vessel Effects (Deterministic for Strainer Head Loss /Risk-Based for In-Vessel Effects Resolution Path)**
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# Resolution Paths for GSI-191

- **Option 1: Compliance with 10 CFR 50.46 Based on Approved Models**
  - Plants need to demonstrate that they meet “clean plant criteria” issued by the NRC on May 2, 2012 (ML 120730181)
  - Or have sufficiently low strainer bypass to meet the 15 grams per fuel assembly limit endorsed by the NRC in their SE for WCAP-16793

# Resolution Paths for GSI-191

- **Option 2: Deterministic or Risk-Informed**

- Option 2 is a graded approach in which the licensee's actions, and the schedule for those actions, are based on the amount of fibrous insulation in the plant. Licensees would implement defense-in-depth measures to mitigate the residual risk from those issues that have not been resolved.
- **Option 2a: Deterministic Resolution Path**
  - The plant will evaluate the applicability of alternative resolution and acceptance criteria being developed by the PWROG test and analysis program.
- **Option 2b: Full Risk-Informed Resolution Path**
  - The risk-informed path (Option 2B) would allow plants to utilize risk-informed resolution methods that are currently being piloted by STPNOC. Plants choosing this option will be required to develop risk assessment models and perform plant-specific testing necessary to justify major assumptions.

# Resolution Paths for GSI-191

- **Option 3: Different Regulatory Treatment for Suction Strainer and In-Vessel Effects (Deterministic for Strainer Head Loss /Risk-Based for In-Vessel Effects Resolution Path)**
  - Option 3 provides for separate resolution paths for strainers and in-vessel effects. In this option, a deterministic approach similar to Option 2 is used to resolve the strainer issue. In-vessel effects will be resolved using a risk-informed approach

# Option 1 Status

- Catawba Units 1 and 2 Completed Fall 2013
  - Watts Bar Unit 2 Completed Spring 2014
  - McGuire Units 1 and 2 Completed Spring 2014
  - Oconee Units 1, 2 and 3 Under Review - Completion Spring 2014
  - Salem Units 1 and 2 Completed Spring 2014
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- An additional 5 plants, comprising 9 units, are awaiting increased fiber limits, from the current PWROG program, to provide additional operational margin.

## Option 2a (Deterministic) Status

- PWROG Program for In-Vessel Effects
  - Program focused on establishing improved in-vessel fibrous debris limits.
  - Planned testing and analysis program expected to be complete by February 2015.
  - SER for revised Topical Report anticipated first quarter 2016.
- 32 units have chosen Option 2a as their resolution path

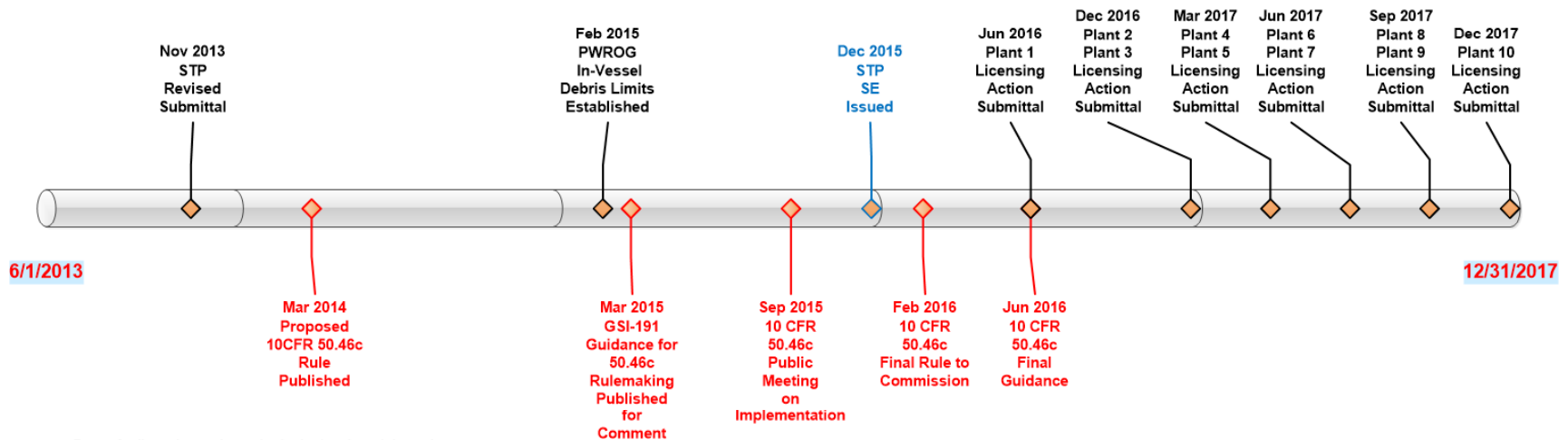


## Option 2b (Risk Informed) Status

- STP Risk-Informed Pilot Plant Project
  - NRC review expected to be complete by the end of November, 2015.
  - STP is responding to NRC RAIs.
- Other risk-informed resolution path plants are utilizing lessons learned from STP effort to optimize their resolution strategy and scope of work
- Timeline on next slide identifies the approximate dates that 2b plants plan on submitting their LAR for NRC review

# Risk-Informed Plants (Option 2b) Licensing Submittal Schedule and 10 CFR 50.46c Rulemaking Activities Timeline

Risk-Informed Plants Licensing Submittal Schedule and 10 CFR 50.46c Rulemaking Activities Timeline



Dates for licensing action submittals developed through discussions between 2b plants with consideration of expected receipt of SE for STP and desire to stagger the submittals.

Dates for 10 CFR 50.46c Rulemaking activities taken from COMSECY-13-0006, VR-COMSECY-13-0006, and Federal Register Notice Vol. 79, No. 56, Monday, March 24, 2014.