

Pressurized Water Reactor Owners Group
Resolution of GSI-191
2010 Regulatory Information Conference (RIC)

**PWR Owners Group
Resolution of GSI-191**

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Resolution of GSI-191

Program Overview

- Work Scope for the PWROG Activities:
 - 18 projects have (or will be) completed
 - First project started in 1997
 - to provide information for GL 97-04 “ECCS Sump/NPSH Issue”
 - Interaction with NRC on a weekly basis



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NRC Safety Evaluations

- Four (4) NRC Safety Evaluations will be Issued
 - [NEI 04-07](#) – Pressurized Water Reactor Sump Performance Evaluation Methodology
 - [WCAP-16530](#) – Evaluation of Post- Accident Chemical Effects in Containment Sump Fluids to Support GSI 191
 - [WCAP-16793](#) – Evaluation of Long-Term Cooling Considering Particulate, Fibrous & Chemical Debris in the Recirculation Fluid
 - [WCAP-16406](#) – Evaluation of Downstream Sump Debris Effects in Support of GSI-191



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Technical Areas Addressed

- Break Selection
- Debris Generation/Zone of Influence
- Debris Characterization
- Latent Debris
- Head loss and Vortexing
- Net Positive Suction Head
- Coatings
- Debris Source Term
- Structural Analysis
- Upstream Effects
- Downstream Effects ex-vessel
- Long Term Cooling Effects
- Chemical Effects



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Results of the Reviews

- NRC has attached Conditions and Limitations to each of the Safety Evaluations issued
- Plants are currently revising (or have already revised) their design criteria based on the NRC Closure of GL 2004-02
- Plants have made commitments:
 - Coating inspections
 - Latent debris surveys
- Plants must be operated within the revised design criteria



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Inputs from Various Groups

- Input is required from various technical areas:
 - Licensing
 - Risk
 - Analysis
 - Equipment
 - Materials
 - Procedures



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Type of Inputs

- Licensing
 - 50.59 reviews
 - LERs
- Risk
 - Signification of finding
 - New debris source
 - Wear of equipment
- Analysis
 - Changes in fuel design
 - Changes in flow rates
new pumps, motors
 - Flow Balance
- Equipment owners
- Materials
 - Material wear
- Procedures
 - New procedures to maintain



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Future Items

- NRC Inspections
 - CDBI's
 - Regional
 - Guidance has been revised
 - IP 71111.17 (Evaluations of Changes, Tests, or Experiments and Permanent Plant Modifications)
 - IP 71111.18 (Plant Modifications)
- Discussion on Recommendations for the Future
 - Presentation on maintaining containment recirculation sump functionality following implementation of GL 2004-02 be given next

