



# BWROG ECCS SS Resolution Plan

**Steve Scammon,  
Committee Chairman**

**June 3, 2010  
NRC  
Bethesda, MD**



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# Introductions

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BWROG Executive Committee Vice Chairman: Dave Czufin

BWROG Chairman: Ted Schiffley

Committee Chairman: Steve Scammon

GEH:

Craig Nichols, Program Manager

Rob Whelan, ECCS SS Project Manager

Alion Science and Technology: Rob Choromokos

# Background

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NRC requested that BWROG address new ECCS suction strainer concerns (April 10, 2008 letter from John A. Grobe)

BWROG formed ECCS Suction Strainer Committee to address:

- NRC issues for BWRs not previously addressed by URG
- Lessons learned from PWROG response to GSI-191

# Recent Activities

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Fuel test planning – concurrence from GEH, AREVA, and Westinghouse

Walkdowns – results being processed from at least ten walkdowns

GEH LOCA analysis – switching to SAFER methodology

# Recent Activities (continued)

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Based on PWROG lessons learned, initiated development of comprehensive Project Plan

Project plan final review complete May 5, 2010

Industry executive review and funding approved May 18, 2010

# Overall Philosophy

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1. Communicate closely with NRC and obtain confirmation before attempting major work
2. Complete most testing and analysis at a generic level
3. Update URG and complete any plant-specific follow-up after generic work is done

# Four Technical Areas

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Debris Source Term

Strainer Headloss

Downstream Effects – Components

Downstream Effects – Fuel

# Plan: Source Term (1 of 3)

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Current methodology to be validated:

1. Debris characteristics (3Q 2011)
2. ZOI adjustment for air jet testing (4Q 2010)
3. Debris transport / erosion characteristics (3Q 2011)
4. Near-field effects and scaling (4Q 2011)
5. Spherical ZOI (2Q 2011)



# Plan: Source Term (2 of 3)

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To be developed using plant-specific inputs:

1. Assessment of coatings (2Q 2011)
2. Assessment of ZOI for Protective Coatings (1Q 2011)
3. Latent debris
  - a. Debris characteristics “85/15” (3Q 2011)
  - b. Debris Load (3Q 2011)

# Plan: Source Term (3 of 3)

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To be developed via testing and analysis –  
Chemical Effects

1. Material dissolution correlations and verification (4Q 2011)
2. Headloss testing in chemical environment (2Q 2013)

# Plan: Strainer Headloss

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1. Review previous testing dataset (3Q 2012)
2. Perform additional vendor-specific tests or revise correlations if needed (3Q 2012)
3. Validate original thin bed assumptions through testing and report results (1Q 2014)

# Plan: Downstream Effects - Components

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1. Develop debris bypass source term (4Q 2010)
2. Utilize methods similar to WCAP 16406 on components (1Q 2012)
3. Perform generic component evaluations (2Q 2014)
4. Provide plant-specific follow-up actions if needed (1Q 2015)

# Plan: Downstream Effects - Fuel

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1. Establish fuel test parameters (GEH LTR1, 3Q 2010; AREVA / Westinghouse 1Q 2012 LTR2-3)
2. Single facility and procedures to be used by all fuel vendors for testing (4Q 2012)
3. Conduct testing with 3 fuel vendors (3Q 2013)
4. Share final results of testing with formal submittal (Addendum to LTR1,2,3, 2Q 2014)

# Final Resolution

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## URG Supplement (1Q 2015)

- Incorporates all generic work
- Provides guidance for plant-specific work

Plant-specific follow-up as required 2015+

# Conclusion

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BWROG has re-planned the project

Funding has been committed

Executive backing for project plan

Continued interaction with NRC is essential