



BWROG Plans to Address In-Vessel Downstream Effects

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NRC-BWROG Meeting
October 21, 2009



Meeting Agenda

Introductions and meeting purpose

BWROG analysis results (closed to public)

BWROG plans and schedule for resolution of in-vessel effects

GNF fuel testing insights

Discussion

Public comment

Topics

Background

Preliminary schedule

Discussion and questions

Background

9/11/2008: BWROG presented initial in-vessel effects analysis results to NRC 9/11/2008

10/7/2008: 3 BWR fuel vendors met to develop general plans for testing; NRC participated

5/20-21/2009: BWROG subcommittee planning meeting

7/17/2009: Letter providing overall plans for response to strainers issue including in-vessel effects

Background

July 17 letter to NRC: The BWROG proposes up to four LTR submittals for NRC review/approval of BWROG plans.

- First LTR prepared by GE-Hitachi (GEH) that generically analyzes blockage effects for determination of limiting conditions and applies those conditions to the GNF fuel bundle design. This LTR includes the bundle testing design. Actual test results will be provided in later revisions to this LTR
- Second LTR prepared by third party to compare the results of the GEH analysis with fuel bundle designs provided by the other two BWR fuel vendors (AREVA, and Westinghouse) to determine need for additional testing
- Third and fourth LTRs to report the actual test results for AREVA and Westinghouse BWR fuel as necessary

Before committing significant funds to testing itself, the BWROG will await completion of NRC review of the LTR(s).

Background

July 23 meeting

- Preliminary fuel blockage analysis results
- Plans and schedule for resolution of in-vessel effects
- Committed to brief NRC again when analysis complete

July 30 meeting

- Plans and schedule for remaining strainer issue resolution activities

Schedule

Activity	Status	Current Schedule
Activities supporting in-vessel effects work: Source Term development		
Preliminary source term development	Final draft in preparation	10/30/09

Schedule

Activity	Status	Current Schedule
Activities supporting in-vessel effects work: Bypass Fraction determination		
Determination of need for testing vs analysis	Literature search and recommendation on testing	November 15, 2009
Testing if required	TBD	TBD

Schedule

Activity	Status	Current Schedule
Fuel Analysis and Testing LTR		
Perform thermal-hydraulic analysis of potential fuel bundle blockage scenarios to develop limiting conditions for generic BWR fuel bundle	1.Reflood scenario (lower tie plate) 2.Remaining scenarios (core spray, natural circulation, bypass region)	1. Complete 2. Complete

Schedule

Activity	Status	Current Schedule
Fuel Analysis and Testing LTR		
Integrate GNF fuel bundle information with analysis results		Complete
Evaluate analysis results for GNF fuel bundle		Complete
Status meeting with NRC		October 21, 2009

Schedule

Activity	Status	Current Schedule
Fuel Analysis and Testing LTR		
Address AREVA and Westinghouse BWR fuel bundle designs	Kickoff meeting 8/12/09 Proprietary agreements in progress; discussion ongoing	TBD
Address BWR product line differences	In progress	December 31, 2009
Draft test plans for fuel; to include detailed test facility info	Awaiting source term	February 28, 2010
Integrated test plan for all BWR fuel types	Proposed	March 31, 2010

Schedule

Activity	Status	Current Schedule
Fuel Analysis and Testing LTR		
Meet with NRC to discuss test plan	Proposed	April 2010
NRC feedback on test plan	Proposed	April 2010
Submit LTR	In progress	May 31, 2010
NRC draft SER	Proposed	February 2011
Fuel testing	Proposed	2011

Discussion and Questions
