

Leak-Before-Break (LBB) Research Project

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CSNI - WGIAGE Meetings
Metals Subgroup
April 12– 14, 2010
Paris, France

LBB Research: Actions Over Preceding Year



- CAP was prepared and recommended for approval at 2009 WGIAGE meeting
- CAP was not approved by PRG at June 2009 meeting
 - Concerned about number of projects in WGIAGE
 - Concerned about the burden of country surveys
- CAP was modified and resubmitted for approval
- Approval granted at December 2009 meeting

LBB Research: Current Research Plan

- **Objectives:** To identify technical areas of mutual interest related to
 1. Evaluation of structural integrity of piping systems using deterministic and/or probabilistic methods
 2. Demonstration that flaws in piping systems will exhibit leaks prior to failure
- **Phase I**
 - Review of past activities
 - CSNI LBB summary (app. 10 years ago)
 - More recent CNSC survey conducted by EMCC (Wilkowski)
 - Identify gaps for use in an updated survey
 - Develop and conduct a survey
 - Identify current regulatory and technical requirements used to demonstrate structural integrity of pressure boundary piping and the LBB concept
 - Identify technical and regulatory concerns related to the aging degradation in these systems, focus on systems susceptible to SCC
 - Identify common issues among the interested countries.
 - Develop plan for sharing information and potentially conducting joint research
- **Phase II**
 - Define scope with research plan
 - Propose follow-on CAPS

LBB Research: Deliverables & Milestones



- **Phase I**
 1. Develop draft questionnaire: April 2010
 2. Complete review of past activities: June 2010
 3. Complete gap analysis and revise questionnaire (with inputs from countries): July 2010
 4. Obtain questionnaire responses: December 2010
 5. Analyze questionnaire responses to identify and prioritize common technical/regulatory issues: February 2011
 6. Develop comprehensive research plan for any identified follow-on research activities: April 2011 (during IAGE meeting)

- **Phase II**
 - Extract from the research plan developed under Phase I
 - Describe in the associated CAPS.