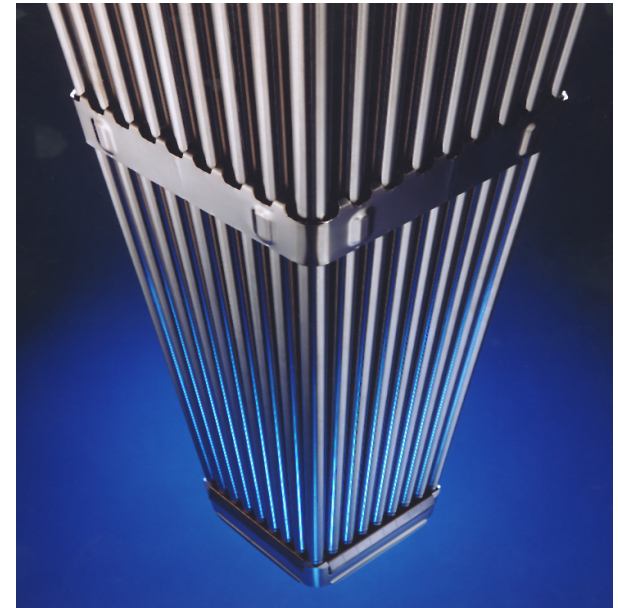


Global Nuclear Fuel Americas

Proposed New LOCA Requirements

GNF Perspective on Implementation

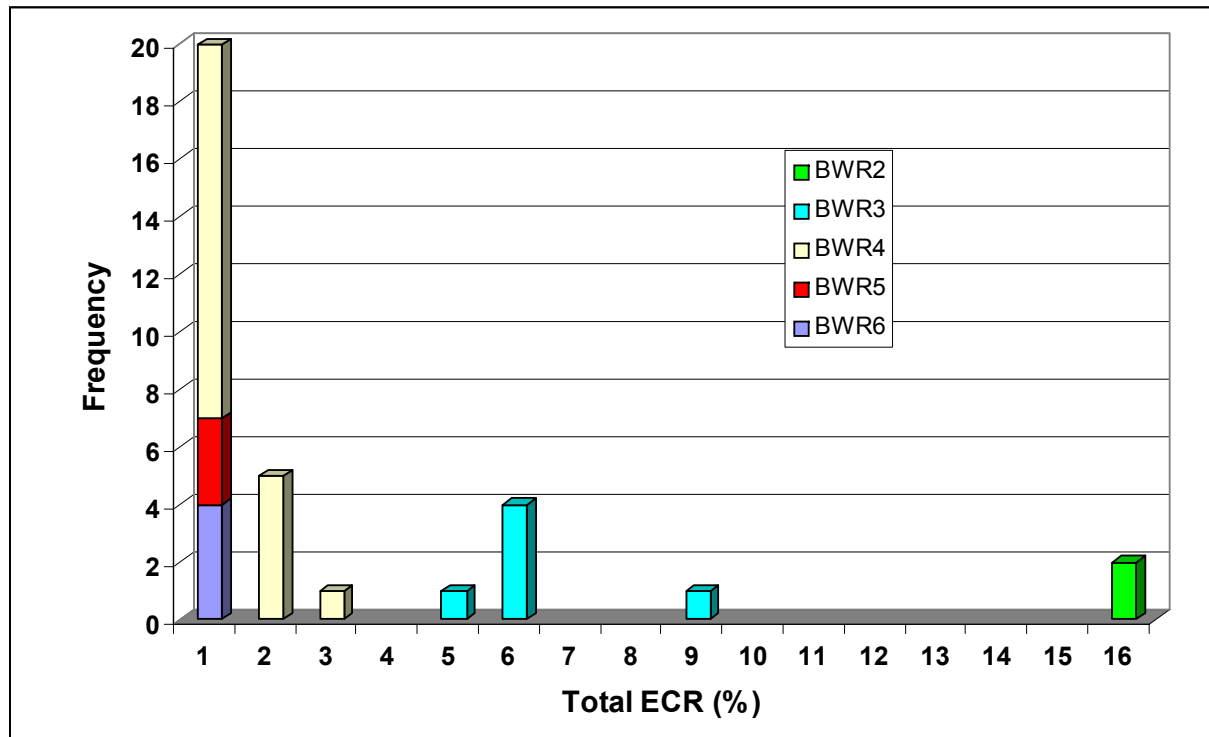
Public Workshop September 2008



Global Nuclear Fuel

A Joint Venture of GE, Toshiba, & Hitachi

Potential impact of change in ECR limit



- Change in ECR limit will affect some operating BWRs.
- Impact will be greater if two-sided oxidation is mandated.

GNF perspective on Two-sided oxidation for BWR fuel:

- Overly conservative for BWR fuel at typical discharge exp.
- Little or no safety return for cost associated with methods change and reevaluation.

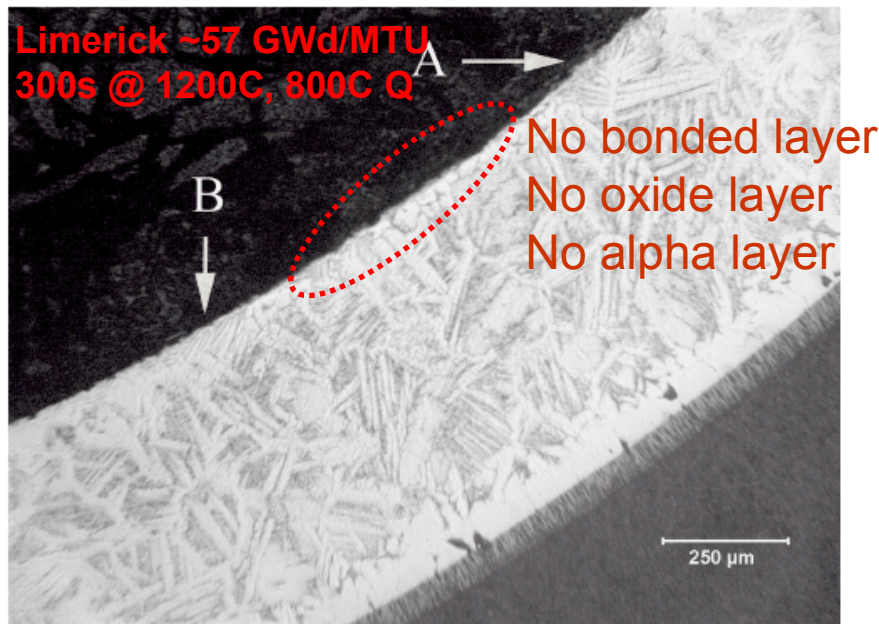


Figure 234. Evidence of local area on cladding inner surface of oxygen-stabilized alpha (left of B) for ICL#2 sample at 50 mm above the burst midplane. The inner-surface region indicated by "A" does not have such an alpha layer and is more typical of what is observed for most of the inner surface at this axial location.

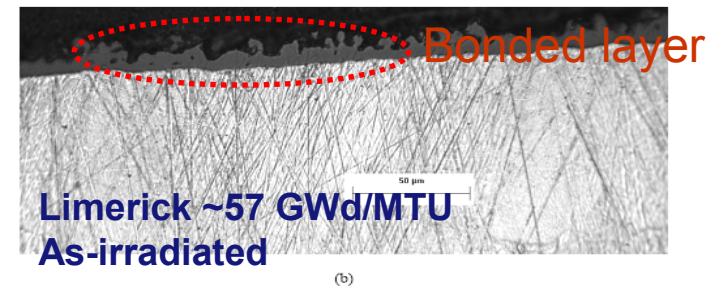
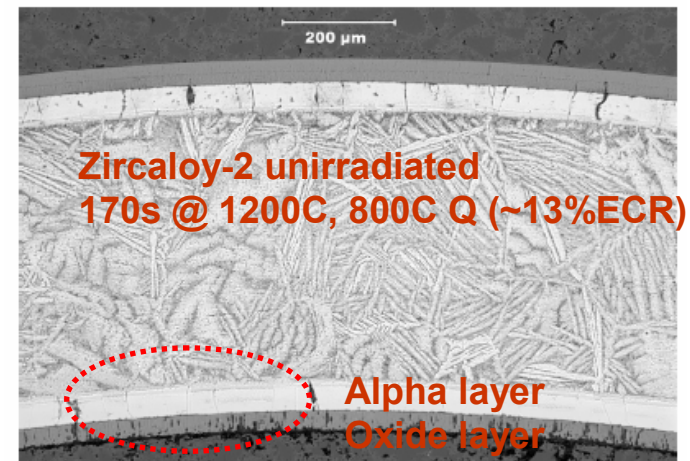


Figure 128. Images of high-burnup Limerick BWR fuel-cladding bond at fuel-midplane location: (a) prior to defueling in nitric acid and (b) after defueling in nitric acid



GNF perspective on H effect on ECR limit:

- Minor benefit relative to the stated safety concern.
- Methods change or modification will need to be implemented and evaluations redone, submitted and approved
 - Total cost for suppliers, licensees and NRC is high
- Exposure dependent H model needs to be developed/refined with high cost impact for implementation, review and approval.
- No practical poolside technique for assessing H in cladding.
 - Consider other ways to provide the assurance for post quench ductility

GNF perspective on Periodic testing (PQD and breakaway oxidation):

- No benefit to public safety.
- Medium cost impact for test facility set up and maintenance.
- Concern due to surface roughness can be addressed through quality control on surface roughness
- In general, recommend identifying parameters that affect PQD or HT oxidation; then control these parameters.