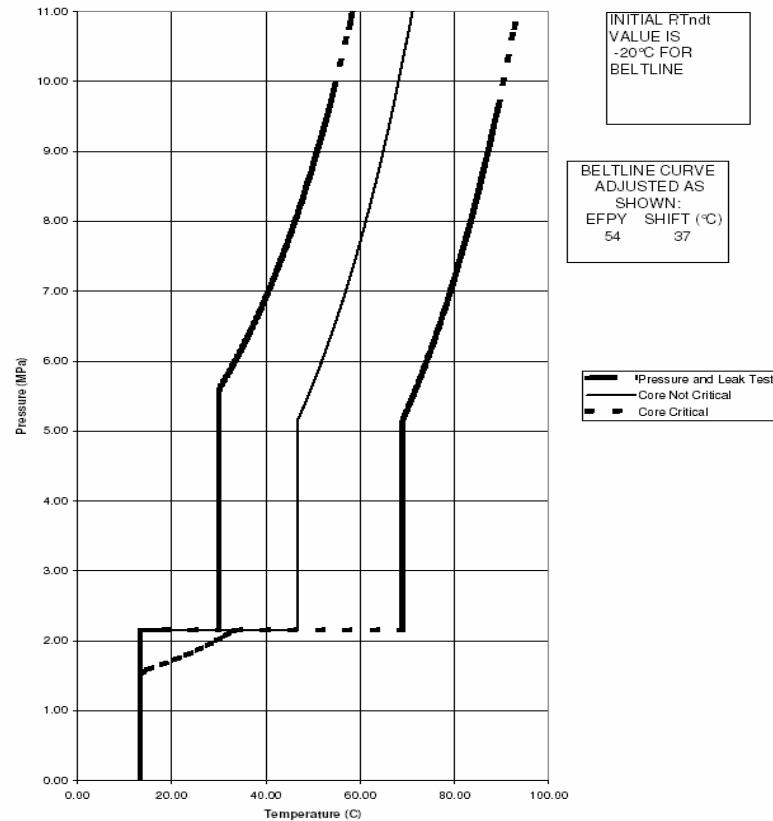


Pressure–Temperature Limits



ESBWR DCWG Meeting

May 22, 2008

Mark Loeffler (GEH)

Objectives

- Respond to NRC's presentation on April 10, 2008
- Describe DCWG plan to provide pressure-temperature limit information
- Request NRC feedback on proposed scope and schedule

Pressure-Temperature (PT) Limits

- Must meet 10CFR50.60 and Appendix G (fracture toughness requirements)
- Must meet SRP 5.3.2 (Section XI ASME)
 - Allows limits in DCD or COLA
- PT Limit Curves in T.S. or Pressure-Temperature Limits Report (PTLR)
- PTLR Guidance in GL 96-03
 - States the need for NRC approved methodology

Pressure-Temperature (PT) Limits

- DCD has Representative Curves / COL Item
 - *5.3-1-A: The COL applicant shall submit a full description of the methodology for preparing the plant specific pressure and temperature limits for NRC review and approval.*
- To address COL Item, COL Applicant will:
 - Submit P-T limits methodology in an LTR in August 2008
 - Submit revised LTR to add bounding numerical evaluation in December 2008

COL Holder Action

- Plant-Specific P-T Curves
 - Develop plant-specific curves based on this previously approved methodology with actual vessel data
 - Place P-T curves in plant-specific PTLR
 - LTR will have PTLR template for license holder to use

LTR Content – ESBWR P-T Curve Assumptions

Curves are bounding as long as the following items remain valid:

1. 10 CFR 50 Appendix G remains unchanged.
2. Regulatory Guide 1.99, Rev. 2 is still applicable.
3. Adjusted Reference Temperatures (ART) at the 1/4T locations remain bounding.
 - a. The limiting Cu and Ni material composition remain bounding.
 - b. The fluence used to develop the ART remains bounding.
4. There are no significant design changes.
5. There are no significant changes to the operating conditions.

Questions?