

BWR OWNERS' GROUP

Lesley A. England, Chairman
Tel: (504) 381-4145

c/o Gulf States Utilities Company • P.O. Box 220 • St. Francisville, LA 70775 • Fax: (504) 635-5068

BWROG-93130
November 9, 1993

U. S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: J. Strosnider
Office of Nuclear Reactor Regulation

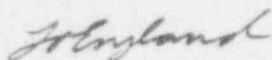
Subject: **BWR OWNERS' GROUP SAFETY ASSESSMENT - BWR SHROUD
CRACK INDICATIONS**

The BWR Owners' Group and GE-Nuclear Energy have performed a review of the safety significance of the circumferential crack indications observed in the heat-affected zone of the top guide support ring weld of the core shroud assembly. The attached report presents the results of the review and demonstrates that these crack indications do not represent a threat to the safe operation of a BWR.

The shroud is extremely flaw tolerant because of the combination of ductile material and low stresses. For 360° circumferential cracking, utilizing ASME Code safety factors, crack depths of up to an average of 90% of the shroud thickness can be tolerated while maintaining the shroud's structural integrity for normal operation and postulated severe accident conditions. Even with only 10% thickness remaining, the ASME Code safety margins are maintained. In the unlikely event of a design basis accident or seismic condition, with undetected 360° circumferential cracking up to an average of greater than 90% of the shroud thickness, safe reactor shutdown is achieved and adequate core cooling is available.

The comments/positions provided in this letter and the attachment have been endorsed by a substantial number of the members of the BWROG; however, it should not be interpreted as a commitment of any individual member to a specific course of action. Each member must formally endorse the BWROG position for that position to become that member's position.

Very truly yours,



L. A. England, Chairman
BWR Owners' Group

WAZ/LAE/waz
Attachment

cc: R. A. Pinelli, BWROG Vice Chairman
W. T. Russell, NRC
S. J. Stark, GE
R. L. Dyle, BWROG Materials Issues Coordination Committee Chairman
BWROG Primary Representatives
BWROG Internals Inspection and Repair Committee
NRC Public Document Room

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