Ref: LCR 84-14

PROPOSED CHANGE
TECHNICAL SPECIFICATIONS
SALEM GENERATING STATION
UNIT NO. 1

DESCRIPTION OF CHANGE

Technical Specifications Heatup and Cooldown Curves, Figures 3.4.2 and 3.4.3 shall be replaced with the attached revised figures.

REASON FOR CHANGE

This change is required to comply with Tech. Spec. Surveillance Requirement 4.4.9.1.2.

10CFR 50.92 SIGNIFICANT HAZARDS EVALUATION

Eight surveillance capsules for monitoring the effects of neutron exposure on the Salem Unit No. 1 reactor vessel core region material were inserted, prior to initial plant startup, in the reactor vessel between the thermal shield and the vessel wall, vertically centered on the core mid plane. Capsule T was removed after approximately two years (1.08 effective full power years) of plant operation. Post-irradiation mechanical testing of the Charpy V-notch and tensile specimens was performed at the Westinghouse Research and Development Remote Laboratory in accordance with 10CFR50, Appendices G and H.

Capsule T contained passive neutron flux monitors for the purpose of neutron dosimetry. Westinghouse testing showed agreement between the measured neutron fluence level of 2.56×10^{18} neutrons/cm^2 and the calculated fluence level of 2.89×10^{18} neutrons/cm^2 for Capsule T. Since the calculated fluence level was based on core power distributions derived for long term operation, and while the Capsule T data are representative of only Cycle 1 operation, projection of vessel toughness into the future is based on analytically based fluence curves.

Heatup and cooldown limit curves are calculated using the most limiting value of RT-NDT (reference nil-ductility temperature). The most limiting RT-NDT of the material in the core region is determined using the preservice reactor vessel material properties and estimating the neutron radiation induced RT-NDT shift.

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The figures attached to this LCR are the revised heatup and cooldown curves developed from the Capsule T analysis performed by Westinghouse. Derivation of these curves was based on Appendix G, ASME III, 1977 and Summer 1978 Addenda. The analysis results were transmitted in WCAP 9678.
The results of the surveillance capsule analysis indicate that the reactor vessel has adequate toughness for continued safe operation. Adherence to the revised heatup and cooldown curves would ensure the prevention of nonductile failure. This change will be in accordance with the requirements of Tech. Spec. Surveillance Requirement 4.4.9.1.2 for Unit No. 1 and would not involve any Significant Hazards Consideration.

Since the new curves will result in more conservative operation of the reactor vessel, there is no increase in the probability or consequences of any accidents nor are any new accidents introduced. Margins of safety are increased by the more conservative operation.

Since this change introduces curves which are a more stringent limit on operation, it conforms to example (ii) of "...Amendments That Are Not Likely To Involve Significant Hazards Considerations" as provided by the Commission in Federal Register 48FR14870.

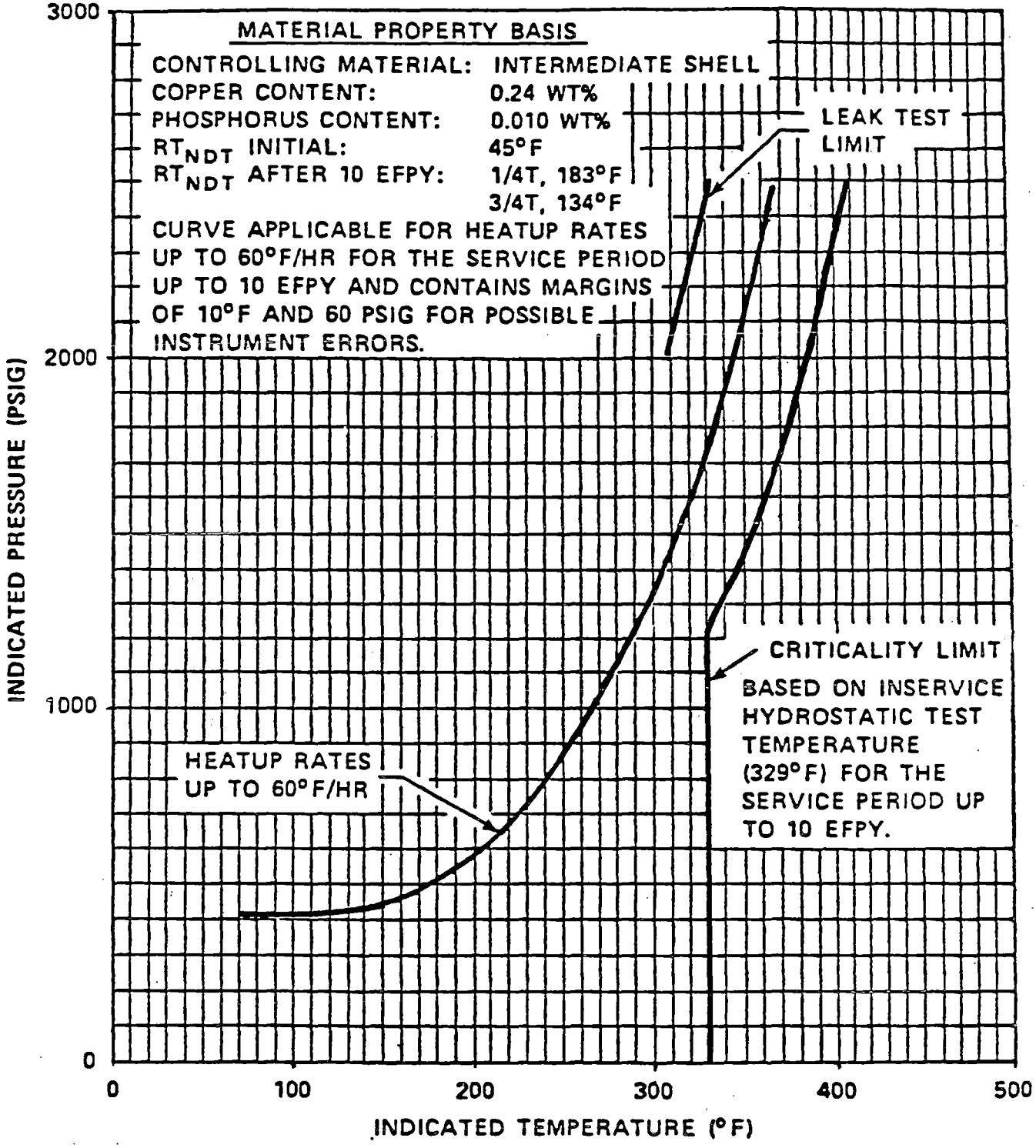

Figure 3.4-2 Salem Unit No. 1 Reactor Coolant System Heatup Limitations Applicable for the First 10 EFPY.

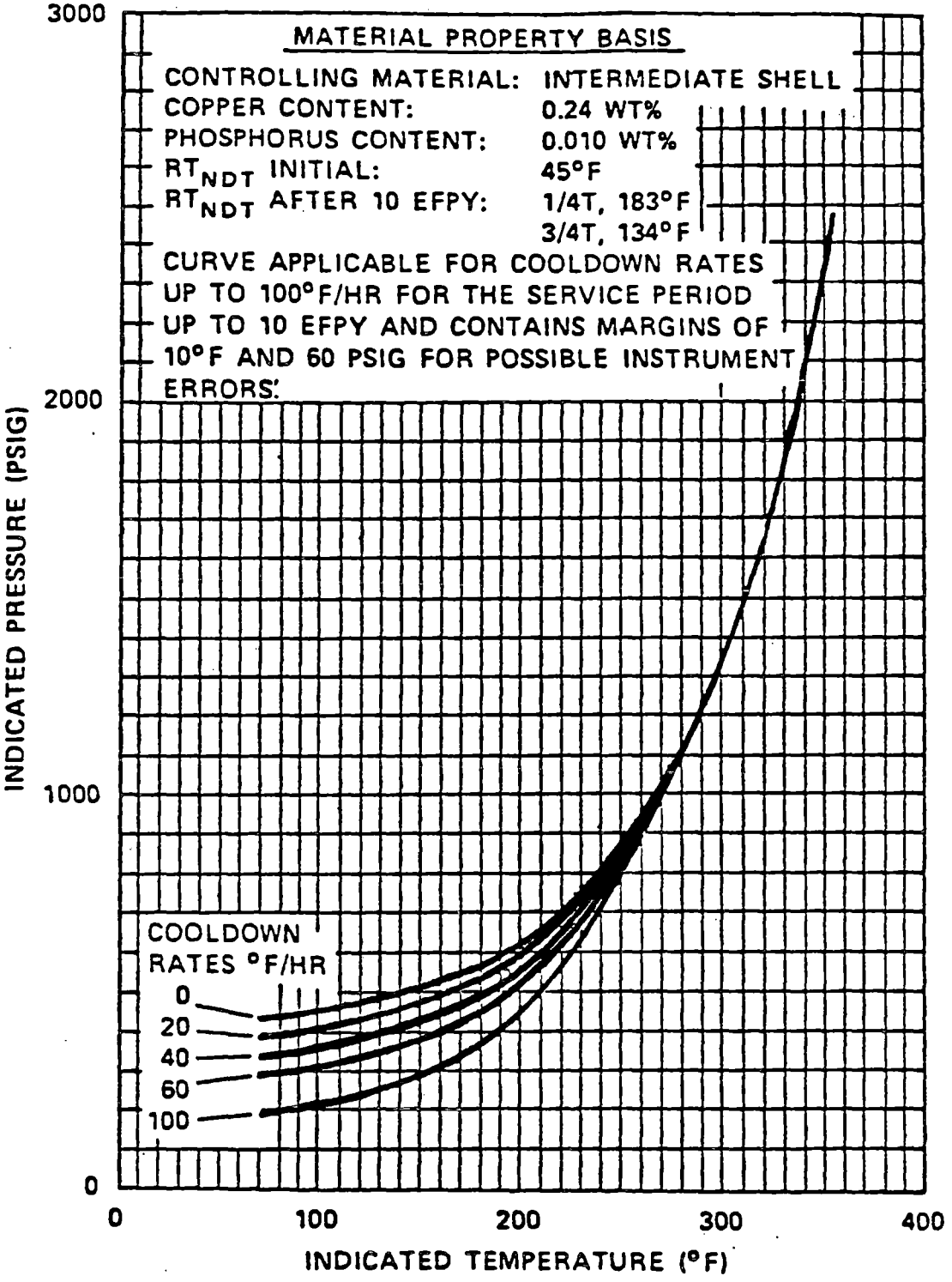

Figure 3.4-3 Salem Unit No. 1 Reactor Coolant System Cooldown Limitations Applicable for the First 10 EFPY