

ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2
REACTOR COOLANT SYSTEM EXCEEDED HEATUP AND COOLDOWN RATES
NCR'S 12P AND 13P
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

During hot functional testing of unit 1, temperature sensors in the loop 2 hot leg and in the lower portion of the pressurizer indicated temperature changes exceeding the rates in the proposed technical specifications. The occurrences coincide with formation and collapse of the bubble in the pressurizer and fill and vent activities in the pressurizer.

The proposed technical specification maximum heatup and cooldown rates are 100°F/hr and 200°F/hr, respectively, for the pressurizer and 100°F/hr (heatup and cooldown) for the Reactor Coolant System (RCS). Temperature Element (TE) 68-24 in the loop 2 hot leg sensed temperature increases from 118°F to 250°F in 1 hour and from 140°F to 250°F in 8 minutes. TE 68-24 also sensed temperature decreases from 255°F to 129°F in 50 minutes, from 260°F to 140°F in 25 minutes, and from 250°F to 142°F in 12 minutes.

TE 68-319 in the pressurizer sensed temperature increases from 135°F to 262°F in one hour and from 125°F to 230°F in one hour. TE 68-319 sensed a temperature decrease from 432°F to 180°F in a one-hour period.

The flow of fluid in and out of the pressurizer through the surge line when forming or collapsing the bubble in the pressurizer during heatup and cooldown is a normal operating occurrence. Similarly, the addition of cooler water to the pressurizer during fill and vent is a normal occurrence. The physical locations of TE 68-24 and TE 68-319 make them subject to the resulting localized transient temperature changes which are not indicative of the RCS and pressurizer as a whole. The technical specifications do not make allowance for the special operating situations.

Corrective Action

Corrective action will be taken after the evaluation from Westinghouse has been reviewed by TVA.

In the interim, a check will be made to ensure that operators are aware of the potential for these localized thermal transients and that the proposed technical specification limits are observed. When a permanent solution is developed, it will be applied to Sequoyah and Watts Bar Nuclear Plants and will also be evaluated for applicability to Bellefonte and Yellow Creek Nuclear Plants.

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