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Southern Nuclear Operating Company

the southern electric system.

J. D. Woodard Vice President Famy Project

November 25, 1992

Docket No. 50-348

U. S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, DC 20555

Joseph M. Farley Nuclear Plant - Unit 1 Interim Plugging Criteria Analysis

Gentlemen:

By letter dated October 8, 1992, the Nuclear Regulatory Commission issued Amendment 95 to the Unit 1 operating license regarding steam generator tube interim plugging criteria. The safety evaluation required information concerning unexpected findings and steam line break leakage be reported to the Staff.

The required information is attached.

If there are any questions, please advise.

Respectfully submitted,

A001 .

have J. D. Woodard

REM: cht-uls]b]kg.nrc

Attachment

cc: Mr. S. D. Ebneter Mr. S. T. Hoffman Mr. G. F. Maxwell

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ATTACHMENT

Interim Plugging Criteria Analysis

1. NRC Request

The NRC Staff will be informed of any unforeseen RPC findings relative to the characteristics of the flaws at TSPs prior to Cycle 12 operation. This includes any detectable circumferential indication or detectable indications extending outside the thickness of the TSP. A safety analysis of the unexpected findings will also be provided.

Southern Nuclear Response

No indications at tube support plates (TSPs) were identified that had cracks extending outside the TSPs by either the bobbin or RPC inspections. In addition, the characteristics of the bobbin and RPC inspection results were typical of that found in earlier farley-1 steam generator inspections. That is, no abnormal degradation such as circumferentially oriented indications were found at the TSPs in the 1992 Unit 1 inspection.

2. NRC Request

The Monte Carlo evaluation for steam line break leakage will be updated to consider the distribution of voltages for indications satisfying the 1 volt criterion during the eleventh refueling outage inspection. The analysis will also reflect the distribution of voltage changes observed during cycle 11.

In addition to the Monte Carlo analysis, the 1.0 gpm leak rate at end of cycle for steam line break will be verified by a deterministic calculation method.

SNC Response

Steam generator C, with the highest voltage indications left in service, is the limiting steam generator for the steam line break analysis. The end of cycle s cam line break leak rate is estimated to be 0.0 gpm by both deterministic and Monte Carlo methods utilizing a steam line break leakage threshold of 2.5 volts. If the conservative assumption of no leakage threshold is applied, the Monte Carlo analysis predicts a 0.04 gpm leak rate. All leakage predictions were made utilizing updated growth rates for Unit 1. Therefore, a large margin exists against the allowable steam line break leak rate limit of 1.0 gpm.

As previously discussed with the Staff, indications above 1.0 volt which were left in service (no RPC flaws) were not included in the steam line break leakage analysis.