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PARKER,W.O. Duke Power Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation

SUBJECT: Submit revised Tech Spec page which contains changes not included in original 790806 submittal re proposed changes to support operation at full rated power during Cycle 6.

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NOTES: M. Cunningham - all amdts to FSAR & changes to Tech Specs

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August 22, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Mr. R. W. Reid, Chief
Operating Reactors Branch No. 4

Subject: Oconee Nuclear Station, Unit 1
Docket No. 50-269

Dear Sir:

My letter of August 6, 1979, proposed changes to the Oconee Nuclear Station Technical Specifications to support the operation of Oconee Unit 1 at full rated power during Cycle 6.

Please find attached a revised Technical Specification page which includes changes which were not included with the original submittal.

Very truly yours,

William O. Parker Jr. by WAH

William O. Parker, Jr.

RLG/sch

Attachment

ELECTRICITY FOR A PROGRESSIVE PIEDMONT
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During normal plant operation with all reactor coolant pumps operating, reactor trip is initiated when the reactor power level reaches 105.5% of rated power. Adding to this the possible variation in trip setpoints due to calibration and instrument errors, the maximum actual power at which a trip would be actuated could be 112%, which is more conservative than the value used in the safety analysis. (4)

Overpower Trip Based on Flow and Imbalance

The power level trip set point produced by the reactor coolant system flow is based on a power-to-flow ratio which has been established to accommodate the most severe thermal transient considered in the design, the loss-of-coolant flow accident from high power. Analysis has demonstrated that the specified power-to-flow ratio is adequate to prevent a DNBR of less than 1.3 should a low flow condition exist due to any electrical malfunction.

The power level trip setpoint produced by the power-to-flow ratio provides both high power level and low flow protection in the event the reactor power level increases or the reactor coolant flow rate decreases. The power level trip setpoint produced by the power-to-flow ratio provides overpower DNB protection for all modes of pump operation. For every flow rate there is a maximum permissible power level, and for every power level there is a minimum permissible low flow rate. Typical power level and low flow rate combinations for the pump situations of Table 2.3-1A are as follows:

1. Trip would occur when four reactor coolant pumps are operating if power is 108% and reactor flow rate is 100%, or flow rate is 92.6% and power level is 100%.

2. Trip would occur when three reactor coolant pumps are operating if power is 80.7% and reactor flow rate is 74.7% or flow rate is 69.4% and power level is 75%.

3. Trip would occur when one reactor coolant pump is operating in each loop (total of two pumps operating) if the power is 52.9% and reactor flow rate is 49.0% or flow rate is 45.4% and the power level is 49%.

   The flux-to-flow ratios account for the maximum calibration and instrument errors and the maximum variation from the average value of the RC flow signal in such a manner that the reactor protective system receives a conservative indication of the RC flow.

For safety calculations the maximum calibration and instrumentation errors for the power level trip were used.

The power-imbalance boundaries are established in order to prevent reactor thermal limits from being exceeded. These thermal limits are either power peaking kw/ft limits or DNBR limits. The reactor power imbalance (power in the top half of core minimum power in the bottom half of core) reduces the power level trip produced by the power-to-flow ratio such that the boundaries of Figure 2.3-2A - Unit 1 are produced. The power-to-flow ratio reduces the power
2.3-2B - Unit 2
2.3-2C - Unit 3