NRC FORM 195 (2-76) U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NUMBER: 50-269/270/287

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DESCRIPTION

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ENCLOSURE

Amdt. to OL/change to tech specs..... to permit the more conservative recalibration of nuclear instrumentation.....

(2-P)

PLANT NAME:

Oconee Units 1-2-3

ACKNOWLEDGED

RJL

FOR ACTION/INFORMATION

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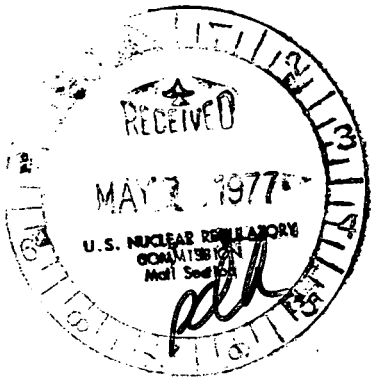
DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE: AREA 704
373-4083

May 6, 1977



Director
Office of Nuclear Reactor Regulations
U. S. Nuclear Regulatory Commission
Washington, DC 2055

Re: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

The Oconee Nuclear Station Technical Specification 4.1 "Operational Safety Review" specifies the frequency and type of surveillance required for Reactor Protective System and Engineered Safety Features Protective Systems instrumentation. Item 3 of Table 4.1-1 requires that the nuclear instrumentation power range amplifier be checked daily against a plant heat balance. Calibration is necessary whenever the neutron power and core thermal power differ by more than 2 percent.

Recently, a review of nuclear instrumentation calibration procedures at Oconee revealed a situation in which the nuclear instrumentation was not conservatively calibrated (see Reportable Occurrence Report Ro-269/77-14). In order to provide additional assurance that the power range nuclear instrumentation channels do not widely move out of calibration, Duke Power Company proposes to increase the frequency of the calibration checks from once per day to once per shift. In order to aid in the performance of this surveillance, it is also proposed that the requirements for nuclear instrumentation recalibration be revised to require this only in the event that the calibration checks show steady-state heat balance power to be greater than nuclear instrumentation power by more than 2 percent.

It is requested pursuant to 10CFR50, 50.90 that the Oconee Nuclear Station Technical Specifications be revised to permit the more conservative recalibration of nuclear instrumentation. The desired changes are shown on the attached technical specification replacement pages.

Very truly yours,

Wm. O. Parker, Jr.

WOP/rr

Attachments

4.1 OPERATIONAL SAFETY REVIEW

Applicability

Applies to items directly related to safety limits and limiting conditions for operation.

Objective

To specify the frequency and type of surveillance to be applied to unit equipment and conditions.

Specification

4.1.1 The frequency and type of surveillance required for Reactor Protective System and Engineered Safety Feature Protective System instrumentation shall be as stated in Table 4.1-1.

4.1.2 Equipment and sampling test shall be performed as detailed in Tables 4.1-2 and 4.1-3.

4.1.3 Using the Incore Instrumentation System, a power map shall be made to verify expected power distribution at periodic intervals not to exceed ten effective full power days.

Bases

Failures such as blown instrument fuses, defective indicators, and faulted amplifiers which result in "upscale" or "downscale" indication can be easily recognized by simple observation of the functioning of an instrument or system. Furthermore, such failures are, in many cases, revealed by alarm or annunciator action. Comparison of output and/or state of independent channels measuring the same variable supplements this type of built-in surveillance. Based on experience in operation of both conventional and nuclear systems, when the unit is in operation, the minimum checking frequency stated is deemed adequate for reactor system instrumentation.

Calibration is performed to assure the presentation and acquisition of accurate information. The nuclear flux (power range) channels amplifiers are calibrated (during steady-state operating conditions) when indicated neutron power and core thermal power differ by more than two percent. During non-steady-state operation, the nuclear flux channels amplifiers are calibrated each shift to compensate for instrumentation drift and changing rod patterns and core physics parameters.

Channels subject only to "drift" errors induced within the instrumentation itself can tolerate longer intervals between calibrations. Process system instrumentation errors induced by drift can be expected to remain within acceptable tolerances if recalibration is performed at the intervals specified.

Substantial calibration shifts within a channel (essentially a channel failure) are revealed during routine checking and testing procedures. Thus, the minimum calibration frequencies set forth are considered acceptable.

Table 4.1-1
INSTRUMENT SURVEILLANCE REQUIREMENTS

Channel Description	Check	Test	Calibrate	Remarks
1. Protective Channel Coincidence Logic	NA	MO	NA	
2. Control Rod Drive Trip Breaker	NA	MO	NA	
3. Power Range Amplifier	ES(1)	NA	(1)	(1) Heat balance check each shift. Heat balance calibration whenever indicated core thermal power exceeds neutron power by more than 2 percent.
4. Power Range	ES	MO	MO(1)(2)	(1) Using incore instrumentation. (2) Axial offset upper and lower chambers after each startup if not done previous week.
5. Intermediate Range	ES(1)	PS	NA	(1) When in service.
6. Source Range	ES(1)	PS	NA	(1) When in service.
7. Reactor Coolant Temperature	ES	MO	AN	
8. High Reactor Coolant Pressure	ES	MO	AN	
9. Low Reactor Coolant Pressure	ES	MO	AN	
10. Flux-Reactor Coolant Flow Comparator	ES	MO	AN	
11. Reactor Coolant Pressure Temperature Comparator	ES	MO	AN	