50-269(270) NRC FORM 195 U.S. NUCLEAR REGULATORY COMMISSION FILE NUMBER NRC DISTRIBUTION FOR FORT 50 DOCKET MATERIAL FROM DATE OF DOCUMENT TO: 5/6/77 Duke Power Company Charlotte, North Carolina --- N. R. C. DATE RECEIVED William O. Parker. Jr. 5/13/77 NUMBER OF COPIES RECEIVED RNOTORIZED PROP INPUT FORM KETTER ORIGINAL A. NCLASSIFIED 3 sland DCOPY. DESCRIPTION ENCLOSURE cornered trans the following advantaged that Amdt. to: CL/change to tech specs...notorized 5/6/77...consists of revision to permit the more conservative recalibration of nuclear instrumentation.... ACKNOWLEDGED DO NOT REMOVE! PLANT NAME: ····· (1-P) (3-P) Oconee Units 1-2-3 RJL SAFETY FOR ACTION/INFORMATION ENVIRO ASSIGNED AD: ASSIGNED AD: Schwenger (5) BRANCH CHIEF: BRANCH CHIEF. Neishbors Sheppard PROJECT MANAGER: PROJECT MANAGER: LIC. ASST. : LIC. ASST. : INTERNAL DISTRIBUTION REG ELLE SYSTEMS SAFETY PLANT SYSTEMS SITE SAFETY & NRC PDR HEINEMAN TEDESCO ENVIRO ANALYSIS $I \in E(2)$ SCHROEDER BENAROYA DENTON & MULLER OELD____ Charles V 1.4 LAINAS **GOSSICK & STAFF** ENGINEERING IPFOLITO ENVIRO TECH. MIPC KIRKWOOD ERNST MACARRY BALLARD CASE BOSNAK OPERATING REACTORS YOUNGBLOOD HANAUER SIHWEIL HARLESS STELLO PAWLICKI SITE TECH, OPERATING TECH. GAMMILL PROJECT MANAGEMENT REACTOR SAFETY BOYD EISENHUT STEPP ROSS P. COLLINS SHAO HULMAN NOVAK HOUSTON ROSZTOCZY BAER___ PETERSON SITE ANALYSIS CHECK BUTLER VOLLMER MELTZ GRIMES BUNCH HELTEMES AT & I J. COLLINS SKOVHOLT SALTZMAN KREGER RUTBERG EXTERNAL DISTRIBUTION CONTROL NUMBER LPDR: WG/hg/lg NAT LAB: BROOKHAVEN NAT. LAB. TIC: REG.V.IE ULRIKSON (ORNL) INSIC: LA PDR ASLB: 771360033 / CONSULTANTS: ACRS/6 CYS HOLDING/SENT AS CATB

NAC FORM 195 (2-76)

Regulatory Docket Fi

DUKE POWER COMPANY

Power Building 422 South Church Street, Charlotte, N. C. 28242

WILLIAM O. PARKER, JR. Vice President Steam Production May 6, 1977

TELEPHONE: AREA 704 373-4083

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,

s/William O. Parker, Jr.

Wm. O. Parker, Jr.

WOP/rr

Attachments



May 6, 1977 Page 2

WILLIAM O. PARKER, JR., being duly sworn, states that he is Vice President of Duke Power Company; that he is authorized on the part of said Company to sign and file with the Nuclear Regulatory Commission this request for amendment of the Oconee Nuclear Station Facility Operating Licenses DPR-38, DPR-47, and DPR-55; and that all statements and matters set forth therein are true and correct to the best of his knowledge.

s/William O. Parker, Jr.

William O. Parker, Jr., Vice President

Subscribed and sworn to before me this 6th day of May, 1977.

s/Edna B. Farmer

Notary Public

My Commission Expires:

October 24, 1977

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 nonsteady-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.

Channel Description		Check	Test	<u>Calibrate</u>	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 indi- cated 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 pre- vious 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	МО	AN	
9.	Low Reactor Coolant Pressure	ES	МО	AN	
10.	Flux-Reactor Coolant Flow Comparator	ES	МО	AN	
11.	Reactor Coolant Pressure Temperature Comparator	ES	МО	AN	

4.1-3

Table 4.1-1 INSTRUMENT SURVEILLANCE REQUIREMENTS

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