

TABLE 3.3-10

## ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
1. Containment Pressure	2	1
2. Reactor Coolant Outlet Temperature - $T_{HOT}$ (Wide Range)	2	1
3. Reactor Coolant Inlet Temperature - $T_{COLD}$ (Wide Range)	2	1
4. Reactor Coolant Pressure - Wide Range	2	1
5. Pressurizer Water Level	2	1
6. Steam Line Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level - Narrow Range	2/steam generator	1/steam generator
8. Refueling Water Storage Tank Water Level	2	1
9. Auxiliary Feedwater Flow Rate	1 X/steam generator	1/steam generator
10. Reactor Coolant System Subcooling Margin Monitor	1	1
11. PORV Position Indicator*	1 X/Valve	1/Valve
12. PORV Block Valve Position Indicator**	<del>2/Valve</del> 1/Valve	<del>1/Valve</del> 1/Valve
13. Pressurizer Safety Valve Position Indicator	1/Valve	1/Valve
14. Containment Sump Water Level (Wide Range)	2	1

a. Unit 1  
b. Unit 2

Attachment 2

Discussion and No Significant Hazards Analysis

## DISCUSSION AND NO SIGNIFICANT HAZARDS ANALYSIS

The proposed amendment would change the Total Number of Channels requirement on Table 3.3-10 for the Auxiliary Feedwater Flow Rate, PORV Position Indicator and PORV Block Valve Position Indicator instrumentation. The current requirements are:

Auxiliary Feedwater Flow Rate - 2/Steam Generator

PORV Position Indicator - 2/Valve

PORV Block Valve Position Indicator - 2/Valve (Unit 1)

This amendment would change these requirements to:

Auxiliary Feedwater Flow Rate - 1/Steam Generator

PORV Position Indicator - 1/Valve

PORV Block Valve Position Indicator - 1/Valve

The first two changes would reflect the results of the Regulatory Guide 1.97, revision 2 review which was done for Catawba. Attachment 3 contains the appropriate pages from the Regulatory Guide 1.97 review which address the Auxiliary Feedwater Flow Rate and PORV Position Indicator Instrumentation.

The Auxiliary Feedwater Flow Rate and PORV Position Indicator instrumentation are both classified as Type D Variables and fall under the Category 2 definition as presented in Regulatory Guide 1.97. Type D Variables are those variables that provide information to indicate the operation of individual safety systems and other systems important to safety. These variables are to help the operator make appropriate decisions in using the individual systems important to safety in mitigating the consequences of an accident. Category 2 instrumentation may be, by definition, less important to safety than Category 1 instrumentation. As such, the requirements for Category 2 instrumentation are less stringent. It has been determined that the applicable requirements for the Auxiliary Feedwater Flow Rate and PORV Position Indicator instrumentation are satisfied by the single channel per steam generator and single channel per valve arrangement that is proposed to be placed in the Technical Specifications.

The requirement for the PORV Block Valve Position indicator has been addressed in a letter dated May 26, 1988 which requested an emergency Technical Specification change for Catawba, Unit 2 (The PORV Block Valve Position Indicators are not addressed in the Regulatory Guide 1.97 review).

Further information concerning the 1.97 review was provided by letter dated May 4, 1988.

10 CFR 50.92 states that a proposed amendment involves no significant hazards considerations if operation in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

## DISCUSSION AND NO SIGNIFICANT HAZARDS ANALYSIS (Continued)

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- (3) Involve a significant reduction in a margin of safety.

The proposed amendment does not involve an increase in the probability or consequences of any previously evaluated accident. The proposed changes are in accordance with the Regulatory Guide 1.97, revision 2 responses and reflect the intent of the design of the systems. Per the 1.97 review, these changes were determined to be adequate for the intended function of the systems.

The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated. The instrumentation affected are post-accident instrumentation and the changes to their Technical Specification requirements will reflect the intended design of the systems. Therefore, no unanalyzed condition or mode of operation will be introduced by these changes.

The proposed amendment does not involve a significant reduction in a margin of safety. The 1.97 review determined that adequate margin of safety would be maintained with the number of instruments which are proposed by this amendment. No significant reduction in a margin of safety will result since the intent of the design of the systems will be reflected by these changes.

For the above reasons, Duke Power concludes that this proposed amendment does not involve any Significant Hazards Considerations.

Attachment 3

Regulatory Guide 1.97, Revision 2

Response for Catawba Nuclear Station

For the Auxiliary Feedwater Flow Rate

And PORV Position Indicator Instrumentation

CATAWBA NUCLEAR STATION  
REGULATORY GUIDE 1.97, REV. 2 REVIEW

D-10	Variable:	Primary System Safety Relief Valve Positions (Power Operated Relief Valves)
	Range:	Closed - Not Closed
	Category:	2
	Existing Design:	The Power Operated Relief Valves are provided with control switches on the main control boards. Actual valve position is provided by QA Condition 1 limit switches on the valves to operate both Closed-Not Closed, and Open-Not Open control switch indicating lights. These valves and their control switch indicating lights are powered from Class 1E busses. Additional indications are provided by the computer. Environmental qualification of the limit switches is described in the Catawba Nuclear Station FSAR, Section 3.11 and the NUREG 0588 submittal. Seismic qualification of the limit switches is described in the Catawba FSAR, Section 3.10.
	Compliance:	This instrumentation is in compliance with Duke's interpretation of RG 1.97, Rev. 2 as clarified in Section 5.5.
	Display:	Control Room control switch indicating lights, Computer Points
	Position:	The installed instrumentation is adequate for the intended monitoring function.
	Implementation Schedule:	Not Applicable.



CATAWBA NUCLEAR STATION  
REGULATORY GUIDE 1.97, REV. 2 REVIEW

D-20	Variable:	Auxiliary Feedwater Flow
	Range:	0 - 110% Design Flow
	Category:	2
	Existing Design:	Catawba has four QA Condition 1 auxiliary feedwater flow transmitters, one per steam generator, monitoring flow from all auxiliary feedwater pumps to each steam generator. The indicated range is 0-600 GPM for a system design flow of 500 GPM. This instrumentation is powered from Class 1E busses. Environmental qualification is described in the Catawba FSAR, Section 3.11 and the NUREG 0588 submittal. Seismic qualification is described in the Catawba FSAR, Section 3.10.
	Compliance:	This instrumentation is in compliance with Duke's interpretation of RG 1.97, Rev. 2 as clarified in Section 5.5.
	Display:	Four Control Room indicators Four computer points
	Position:	The installed instrumentation is adequate for the intended monitoring function.
	Implementation Schedule:	Not Applicable.