

NRC PDR
50-338



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

OCTOBER 29 1979

Docket Nos. 50-280
and 50-281

Mr. W. L. Proffitt
Senior Vice President - Power
Virginia Electric and Power Company
Post Office Box 26666
Richmond, Virginia 23261

Dear Mr. Proffitt:

The staff has recently completed a review of the LER's and Technical Specification requirements related to the Control Rod Position Indication Systems (RPI) at Westinghouse PWRs. We have determined that a wide variation exists in the number of LERS received and the technical specification requirements and have, therefore, decided to clarify our requirements.

At the time of development of the Standard Technical Specifications, a systematic attempt was made to clarify potentially ambiguous specifications. One such specification was the control rod misalignment specification for Westinghouse-designed reactors. Westinghouse has performed safety analyses for control rod misalignment up to 15 inches or 24 steps (one step equals 5/8 inch). Since analysis of misalignments in excess of this amount have not been submitted, we have imposed an LCO restricting continued operation with a misalignment in excess of 15 inches. Because the analog control rod position indication system has an uncertainty of 7.5 inches (12 steps), when an indicated deviation of 12 steps exists, the actual misalignment may be 15 inches. This is because one of the coils, spaced at 3.75 inches, may be failed without the operator knowing about it. The Standard Technical Specifications were written to eliminate any confusion about this, and allow a deviation of up to 12 indicated steps. Surveillance requirements, on the indication accuracy of 12 steps were also prepared to ensure that the 15 inch LCO is met.

There is no difference intended in requirements issued for any Westinghouse reactor. Westinghouse has informed the NRC that all of their customers have been informed of this and that all the licensees should be following the same procedures regardless of the language of their Technical Specification. That is, plants with Technical Specifications written in terms of 15 inch misalignment should be considering the 12 step instrument inaccuracy when monitoring rod position.

A related problem is that the installed analog control rod position indicating system equipment may not, in some areas, be adequate to maintain the control rod misalignment specification requirement because of drift problems in the calibration curves. This is evidenced by numerous LER's concerning rod position indication accuracy. In these cases, the uncertainty may be more than 12 steps.

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Mr. W. L. Proffitt
Virginia Electric and Power Company - 2 -

OCTOBER 29 1979

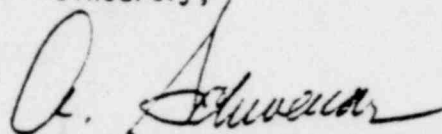
The present Westinghouse Standard Technical Specifications (W-STS) require all full length control rods to be positioned within ± 12 steps (indicated position) of their group step counter demand position. Since numerous problems have developed in signal conditioning circuits for display indication of control rod position, the staff has determined that the "indicated position" requirement may be fulfilled by voltage measurements obtained from the position indication mechanism (and therefore no LER need be submitted) provided a sufficient data base has been established to ensure a correlation between voltage and position. A copy of the current, applicable W-STS Specifications (3/4.1.3.1 and 3/4.1.3.2) are attached for your information and consideration.

It is requested that you review your present technical specifications to ensure that the control rods are required to be maintained within ± 12 steps indicated and that the rod position indication system is verified to be accurate to within 12 steps. If your review indicates that this is not the case, you should so inform the Commission within 30 days of your receipt of this letter together with your plans to correct the deficiencies.

Any needed corrective actions may take several forms; such as (1) revising your technical specifications to limit control rod misalignment to no more than ± 12 steps indicated position, (2) seeking relief by performing analyses justifying (with penalties if needed) greater misalignments, or (3) proposing alternate or supplemental monitoring specifications to demonstrate compliance with the ± 12 step indicated alignment requirement.

If you have any questions on this matter, please contact us.

Sincerely,



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosure:
W-STS Specifications
3/4.1.3.1 and
3/4.1.3.2

cc: w/enclosure
See next page

1595 247

Mr. W. L. Proffitt
Virginia Electric and Power Company

OCTOBER 10 1979

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