### TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

## SEP 30 1986

TVA-SQN-TS-73

Director of Nuclear Reactor Regulation Attention: Mr. B. Youngblood, Project Director PWR Project Directorate No. 4 Division of Pressurized Water Reactors (PWR) Licensing A U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Dear Mr. Youngblood:

In the Matter of )	Docket Nos. 50-327
Tennessee Valley Authority )	50-328

In accordance with 10 CFR 50.90, enclosed are forty (40) copies of a page inadvertently omitted from the justification for our August 8, 1986 submittal (TVA-SQN-TS-73) requesting an amendment to operating licenses DPR-77 and DPR-79 to change the technical specifications of Sequoyah Nuclear Plant units 1 and 2. The proposed change reduces minimum flow rate requirements for the Safety Injection Pumps (SIPs) and Centrifugal Charging Pumps (CCPs). The inadvertently omitted page is page 3 of Letter TVA-86-510, L. L. Williams of Westinghouse Electric Corporation to C. C. Mason of TVA, dated January 16, 1986. Please insert the enclosed page into the appropriate location of the previously transmitted package.

Please direct any questions you may have concerning this issue to Timothy S. Andreychek at 615/870-7470.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R. Gridley, Director Nuclear Safety and Licensing

Sworn to and subscribed before me day of this 1986

Notary Public My Commission Expires

Enclosure cc: See Page 2

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Director of Nuclear Reactor Regulation

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cc (Enclosure): U.S. Nuclear Regulatory Commission Region II Attn: Dr. J. Nelson Grace, Regional Administrator 101 Marietta Street, NW Suite 2900 Atlanta, Georgia 30323

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Mr. Carl Stahle, Sequoyah Project Manager U.S. Nuclear Regulatory Commission 7920 Norfolk Avenue Bethesda, Maryland 20814

Mr. Michael H. Mobley, Director (w/o Enclosures) Division of Radiological Health T.E.R.R.A. Building 150 9th Avenue North Nashville, Tennessee 37203

Mr. G. G. Zech Director, TVA Projects U. S. Nuclear Regulatory Commission Region II 101 Marietta Street, NW, Suite 2900 Atlanta, Georgia 30323 An inservice test shall be conducted with the nump operating at nominal motor nameplate speed for constant speed drives, and at a speed adjusted to the reference speed for variable speed drivers. The resistance of the system shall be varied until either the measured differential pressure or the measured flowrate equals the corresponding reference.

The key phrase for consideration in the discussion is that the measured values is set equal to the reference value. That is, this section of Section XI does not require the addition of measurement error before comparison to the reference value. This of course is contingent upon meeting the measurement accuracies contained in Table IWP-4110-1.

Although the surveillance requirement in question 4.5.2.h does not reference paragraph 4.0.5, it is assumed that the principles identified in Section XI apply. That is, provided the instrumentation used to take the measurements meets the accuracies of table IWP-4110-1 measured values may be compared directly to reference values without accounting for measurement accuracy.

#### Item 3:

Review the Safety Injection Pump performance curve with the Westinghouse Pump Group and Pacific Pump to determine if the pump can operate beyond the present runout flow rate of 660 gpm. Also, if determined the pump can operate beyond the present runout flowrate of 660 gpm, then revise the Technical Specifications to reflect the higher flowrate.

#### Response:

Westinghouse Pump Group has reviewed the Sequoyah pump curves pump numbers 45652, 45653, 45654, 45655 and the maximum pump flowrate for all these pump numbers is 675 GPM. The basis for this value is taken from the applicable pump curves and taking the highest flowrate value from the NPSH curve which is 675 GPM at a minimum NPSH of 38 feet. NOTE: When replacing or ordering new rotating elements verify that these NPSH requirements are met. If the new elements do not meet these requirements, please call Westinghouse to evaluate options. Therefore, based on the pump curves runout flowrate the Technical Specifications's Section 4.5.2.h.l.b can be revised as follows:

"b. The total pump flow rate is less than or equal to 675 gpm."

Also, TVA has requested Westinghouse to call the vendor (Pacific Pump) and determine if the Safety Injection Pump can be operated at a runout flow of 685 gpm. The primary concern with operating at this flow is the NPSH Required of the pump. The Pacific Pump test curves show a maximum test point of 675 gpm after which the NPSH Required curve becomes nearly vertical. The Pacific Pump test engineer (Stu Douglas) confirmed that no testing was performed beyond 675 gpm. The NPSH Required curve beyond 675 gpm is only a conservative representation of its continuation beyond 675 gpm. The actual NPSH Required curve is not expected to be as conservative but this cannot be backed up with test data. 4339e:12