TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401

5N 157B Lookout Place

APR 11 1990

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

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

SEQUOYAH NUCLEAR PLANT (SQN) - MEDIAN SIGNAL SELECTOR (MSS) TESTING

NRC requested that TVA provide additional information on the periodic testing to be performed on the MSS feature to support their review of Technical Specification Change 89-27. Excerpts from draft functional test and calibration procedures are provided in Enclosures 1 and 2, respectively. The steam generator level-channel functional-test procedures will be revised to ensure that the MSS module is functionally tested on a quarterly basis. The feedwater control system calibration procedures will be revised to ensure that calibration of the MSS module is performed on a refueling outage frequency.

Summary statements of commitments contained in this submittal are provided in Enclosure 3. Please direct questions concerning this issue to Russell R. Thompson at (615) 843-7470.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

E. G. Wallace, Manager
Nuclear Licensing and
Regulatory Affairs

Enclosures
cc: See page 2

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1/1

U.S. Nuclear Regulatory Commission

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cc (Enclosures):
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ENCLOSURE 1

DRAFT MEDIAN SIGNAL SELECTOR (MSS) FUNCTIONAL TEST

6.4 As Found Data Verification

[1] **REVIEW** printout **AND**

VERIFY the following:

A. Comparator Output LB-548A as follows:

SETPOINT = 75 %			RESET POINT = 74 %		
MIN ACTUAL	MAX ACTUAL	TECH SPEC ALLOWABLE	MIN ACTUAL	MAX ACTUAL	
$\geq$ 74.8	$\leq$ 75.2	$\leq$ 76.0	$\geq$ 73.8	$\leq$ 74.2	☐

B. Trip Actuation Test - Set and Reset passed. ☐

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[2] **VERIFY** by reviewing chart on Recorder 1-FR-3-103 (FR-540) that the Blue pen (Median Signal Selector output) **DID NOT** follow the Automatic Surveillance Test signal during testing.

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[3] **IF** the Trip Actuation Test failed **OR** the Median Signal Selector output followed the Auto signal **THEN**

NOTIFY the SIMF for PRO evaluation **AND**

PROCEED as directed. (N/A signoff if notification not necessary.)

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NOTE Steps 6.4[4] through 6.4[6] below give actions based on "As Found" data printed. Only one of these options can apply.

[4] **IF** the Comparator Set and Reset values are within tolerance **AND**, the Trip Actuation Test Set and Reset passed, **THEN**

PROCEED TO Section 7.0, POST PERFORMANCE ACTIVITIES. ☐

ENCLOSURE 2

DRAFT MEDIAN SIGNAL SELECTOR (MSS)
CALIBRATION

The following will be added to the existing MI Channel Calibration Instructions that calibrate the Feedwater Control system.

6.? Feedwater Median Signal Selector (MSS) LM-3-111AX (1LY-547D) Module Calibration

[1] **PERFORM** the following to calibrate the Median Selector Module.

[a] LIFT the following wires:

	Performed By	Verified by
A. Input A Terminal Number (?)	☐	☐
B. Input B Terminal Number (?)	☐	☐
C. Input C Terminal Number (?)	☐	☐

_____ /

_____ /

[b] CONNECT Voltage sources to the following points:

A. Input A Terminal Number (?) ☐

B. Input B Terminal Number (?) ☐

C. Input C Terminal Number (?) ☐

[c] APPLY 0.0 vdc to input B.

[d] APPLY 6.0 vdc to input C.

[e] APPLY 1.000 vdc to input A AND

ADJUST R-16 (zero pot) for 1.000 vdc at output.

[f] APPLY 5.000 vdc to input A AND

ADJUST R-19 (span pot) for 5.000 vdc at output.

[2] **REPEAT** [e] and [f] above until desired outputs +/- 0.004 vdc are obtained.

[3] **RECORD** the output values for inputs of 1.000 and 5.000 Vdc in "As Left" section of Data Sheet.

[4] **ADJUST** input B to 3.000 vdc **AND**

RECORD output value in "As Left" Section of Data Sheet.

6.? Feedwater Median Signal Selector (MSS) LM-3-111AX (1LY-547D) Module Calibration (continued)

[5] **PERFORM** the following to verify Median Signal Selector is working properly.

[a] APPLY 2.000 Vdc to input A.

[b] APPLY 4.000 Vdc to input C.

[c] VARY input B slowly beginning at 1.000 Vdc and continuing to 5.000 Vdc while observing the output.

If the operation of MSS is correct the output will be at 2.000 Vdc until the input exceeds 2.000 Vdc, then The output will follow the input until it reaches 4.000 Vdc and remain at this value as the input is increased to 5.000 Vdc.

[6] **VERIFY** that all Data recorded is within the required Accuracy as listed on Data Sheets and the MSS functioned properly as described in step [c] above.

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ENCLOSURE 3

List of Commitments

1. The steam generator level-channel functional-test procedures will be revised to ensure that the MSS module is functionally tested on a quarterly basis.

2. The feedwater control system calibration procedures will be revised to ensure that calibration of the MSS module is performed on a refueling outage frequency.