TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
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FEB 12 1988

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) - OFFICE OF INSPECTION AND ENFORCEMENT (IE) BULLETIN 85-03 - MOTOR-OPERATED VALVE (MOV) COMMON MODE FAILURES DURING PLANT TRANSIENTS BECAUSE OF IMPROPER SWITCH SETTINGS

References: 1. NRC IE Bulletin 85-03 dated November 15, 1985, "Motor-Operated Valve Common Mode Failures During Plant Transients Due To Improper Switch Settings"

2. TVA letter to NRC dated May 12, 1986, "Office of Inspection and Enforcement Bulletin 85-03 - Motor-Operated Valve Common Mode Failures During Plant Transients Due To Improper Switch Settings - Sequoyah Nuclear Plant"

This letter provides a current status of SQN's MOV program to address IE Bulletin 85-03. Enclosure 2 of SQN's initial response (reference 2) listed nine commitment items with scheduled completion dates. SQN has now implemented and completed each of the nine commitment items with the exception of items 6 and 8 given below.

Item 6
Stroke test 1 MOV in each of the test categories 4 and 5 (reference attachment 1 of SQN's May 1986 submittal) under full-flow differential pressure (DP) conditions (total of 2 MOVs) during turbine-driven auxiliary feedwater pump surveillance testing after returning SQN unit 2 to service from its current outage.

Item 8
After issuing a design output document (item 7), revise plant procedures to incorporate these requirements before startup from the unit 2 cycle 3 refueling outage but no later than November 1987.

Item 6 is presently scheduled during unit 2 restart, although the actual commitment states that testing will be performed after returning SQN unit 2 to service. Item 8 has been rescheduled for completion by March 31, 1988. This extension is needed for consolidation of other needed changes to Maintenance Instruction (MI) 10.43 for the purpose of incorporating all changes under one revision. This will ensure that valve operability (proper tongue switch settings) is maintained.

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Enclosure 1 contains a description of each of SQN's seven completed commitments. Attachment A contains a MOV Data Summary Table that lists as-found and as-left torque switch settings for determination of as-found valve operability.

Enclosure 2 restates commitment item 6 and revises the scheduled completion date for item 8. Upon completion of these items, SQN will submit a final report to NRC within the required 60 days (item F of IE Bulletin 85-03) to document full completion.

If you have any questions, please telephone M. R. Harding at (615) 870-6422.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

R Gridley

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ENCLOSURE 1

Upon receipt of the Office of Inspection and Enforcement (IE) Bulletin 85-03, Sequoyah Nuclear Plant (SQN) began evaluating and implementing a program to ensure that valve operator switches are set and maintained properly. It should be noted that SQN was in the middle of an extended outage and well into a major motor-operated valve (MOV) modification and testing effort for 10 CFR 50.49 environmental qualification.

Enclosure 2 of SQN's May 1986 submittal outlined nine activities that SQN would take to address the subject bulletin. The following provides a summary of each of the nine commitment items.

Items 1 and 4

1. Determination/verification of correct switch settings for 21 MOVs on each unit in attachment 1 by August 31, 1986.

4. Stroke test the 21 MOVs on each unit in attachment 1 under non-differential pressure (DP) conditions by August 31, 1986, for verification of correct switch settings as determined for item (b).

SQN Effort

Commitment items 1 and 4 were not completed by August 31, 1986, because of problems in obtaining maximum allowable thrust data from Crane-Alloy Company (Walworth) for valves 1, 2-FCV-1-15, -16, -17, and -18. By way of a TVA letter to NRC dated September 11, 1986, SQN extended the commitment due date on items 1 and 4 to October 18, 1986. Because of a failure of Crane-Alloy to perform their contract with TVA, it was determined that TVA's Division of Nuclear Engineering (DNE) would evaluate the data available for Walworth valves and would establish by engineering evaluation/judgment that the actual thrust being seen in the field for these valves is acceptable. DNE's evaluation allowed SQN to meet the October 18, 1986 commitment date with one exception: 1-FCV-63-40. During initial testing, this valve had a higher thrust value than its identical sister valve, FCV-63-39. By way of a TVA letter to NRC dated October 31, 1986, commitment items 1 and 4 were considered complete; and an additional commitment was made to investigate and complete resolution of 1-FCV-63-40 by November 30, 1986. SQN completed resolution of 1-FCV-63-40 on November 28, 1986. Although no obvious causes were found, it is believed that wedge orientation was the probable root cause, based on vendor comments and final test results.

Attachment A of this enclosure (MOV Data Summary Table) provides the final results of SQN's commitment items 1 and 4.

Item 2

Test the overload protection devices on 1, 2-FCV-1-17 and -18 by August 31, 1986.

SQN Effort

SQN has included the subject valves in preventive maintenance (PM) instructions 1634-001, 1635-001, 1636-001, and 1637-001 to ensure that the overload protection devices are properly tested, sized, and maintained. This was completed as required by August 31, 1986.

Item 3

Review, revise, and prepare (as necessary) procedures for overload protection devices on the 21 MOVs before startup from the unit 2 cycle 3 refueling outage but no later than November 1987.

SQN Effort

SQN performed a review of two existing surveillance instructions (SI) (SI-251.1 and -251.2) to ensure that the overload protection devices for the remainder of the 21 MOVs (those not included under commitment item 2) were properly tested, sized, and maintained. This action was completed July 21, 1986.

Item 5

Stroke test 1 MOV in each of the test categories 1, 2, and 3 (attachment A) under full-flow DP conditions (total of 3 MOVs) by August 31, 1986.

SQN Effort

Full-flow DP testing was performed on the following MOVs:

Valve Number	Test Date
2-FCV-62-91	July 16, 1986
1-FCV-63-22	August 14, 1986
1-FCV-63-40	August 14, 1986

Note: 1-FCV-63-39 (sister valve to 1-FCV-63-40) was also tested under full-flow DP conditions on August 23, 1986.

The design and test DPs for these valves are provided in the MOV Data Summary Table (attachment A).

Item 6

Stroke test 1 MOV in each of the test categories 4 and 5 (attachment A) under full-flow DP conditions (total of 2 MOVs) during turbine-driven (TD) auxiliary feedwater (AFW) pump surveillance testing after returning SQN unit 2 to service from its current outage.

SQN Effort

This item will be completed during unit 2 startup.

ATTACHMENT A

MOV DATA SUMMARY TABLE
SEQUOYAH NUCLEAR PLANT
IE BULLETIN 85-03

NOTES

1. SQN agreed to test 1 MOV in each of the test categories 1, 2, and 3 under full-flow DP conditions (total of 3 MOVs). Reference commitment item 5 of SQN's May 12, 1986 submittal.

2. Torque switch settings in the open direction have been deleted for all 21 MOVs as discussed in SQN's May 12, 1986 submittal. For this reason, all torque switch settings and thrust values are given in the closing direction.

3. Valve Operability Designations:

   Acceptable - as-found closing thrust did not exceed the required closing thrust.

   Indeterminate - as-found data was unavailable. At the time SQN began to implement IE Bulletin 85-03, SQN was in the middle of an extended outage and well into a major MOV modification and testing effort for 10 CFR 50.49 environmental qualification. By the time the Electrical Maintenance Section began testing valves for the bulletin, the actual as-found condition had not been recorded and therefore was indeterminate.

   Unacceptable - as-found closing thrust exceeded the required closing thrust.

4. Valve 2-FCV-63-22 has a required seating thrust of 11,870 pounds; however, the as-found closing thrust was 8,030 pounds, which is unacceptable. Because this valve is required by SQN technical specifications to remain in the open position with power removed (modes 1, 2, and 3) the unacceptable as-found closing thrust would not have prevented this valve from performing its safety function to remain open.

5. At the time of test, 2-FCV-63-25 had a required seating thrust of 14,190 pounds. The as-found total closing thrust was found to be 14,115 pounds. This difference (75 pounds) is less than 1 percent of the total required thrust. The additional seating action provided by this small difference is considered to be inconsequential for valve closure and operability. SQN considers this valve to be acceptable.

Item 7

Issue a design output document that specifies and controls switch settings for the 21 MOVs in attachment A before startup from the unit 2 cycle 3 refueling outage but no later than November 1987.

SQN Effort

SQN has issued the design output document (Drawing Series 47A940) that defines the design basis DP, the required thrust, and the maximum allowable thrust for each of the 21 MOVs. This commitment was completed as required on November 27, 1987.

Item 8

After issuing a design output document (item 7), revise plant procedures to incorporate these requirements before startup from the unit 2 cycle 3 refueling outage by no later than November 1987.

SQN Effort

This item is rescheduled for completion by March 31, 1988. SQN's present procedure (MI-10.43) contains conservative required thrust values. This will ensure that valve operability (proper torque switch settings) is maintained.

Item 9

Delete the opening torque/torque bypass switches on 1-, 2-FCV-1-17, -18, and -51 by August 31, 1986.

SQN Effort

SQN performed modifications to delete the opening torque/torque bypass switches on the subject valves. This action was complete on April 16, 1986.

Conclusion

The data contained in the MOV Data Summary Table (attachment A) provides assurance that these valves would have performed their safety function under the as-found switch settings. It should be noted that all as-found data was not available as requested by part E of the bulletin. At the time SQN developed its MOV test program and began to implement IE Bulletin 85-03, SQN was already in the middle of an extended outage and well into a major MOV modification and testing effort for 10 CFR 50.49 environmental qualification. By the time the Electrical Maintenance Section began testing for IE Bulletin 85-03, an actual as-found condition was not determinable. Attachment A identifies those valves not having as-found conditions.

Upon completion of the remaining commitment items 6 and 8, SQN will submit a final report to NRC within the required 60 days (reference item F of IE Bulletin 85-03) to document completion of these two items.

ATTACHMENT A
MOTOR OPERATED VALVE DATA SUMMARY TABLE
SEQUOYAH NUCLEAR PLANT
IE BULLETIN 85-03

VALVE ID	VALVE OPERATOR	VALVE FUNCTION	DESIGN BASIS DIFF PRESS OPEN/CLOSE (SEE NOTE #1)	TEST DIFF PRESS OPEN/CLOSE (SEE NOTE #2)	AS FOUND TS SETTING OPEN/CLOSE	AS LEFT TS SETTING OPEN/CLOSE	AS FOUND OPERABILITY (SEE NOTE #3)	REQ'D THRUST (CLOSING)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	MAXIMUM ALLOWABLE THRUST (CLOSING)
********** CENTRIFUGAL CHARGING PUMP (CCP) / HIGH-HEAD INJECTION SYSTEM **********											
1-LCV-62-135 ANCHOR/DARLING, 4"-150# F/W GA, 1028-3	SMB-00	CCP SUCTION FROM RWST	200/200	N/A	N/A/1.5	N/A /1.0	INDETERMINATE	4,854 LB	INDETERMINATE	12,123 LB	24,629 LB
2-LCV-62-135 ANCHOR DARLING, 8"-150# F/W GA, 1026-3	SMB-00	CCP SUCTION FROM REFUELING WATER STORAGE TANK (RWST)	200/200	N/A	N/A / 1.0	N/A /1.0	ACCEPTABLE	4,854 LB	11,520 LB	11,520 LB	24,629 LB
1-LCV-62-136 ANCHOR/DARLING, 8"-150# F/W GA, 1028-3	SMB-00	CCP SUCTION FROM RWST	200/200	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	4,854 LB	12,143 LB	12,143 LB	24,629 LB
2-LCV-62-136 ANCHOR/DARLING, 8"-150# F/W GA, 1029-3	SMB-00	CCP SUCTION FROM RWST	200/200	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	4,854 LB	10,639 LB	10,639 LB	24,629 LB
1-FCV-62-132 ANCHOR/DARLING, 4"-150# F/W GA, 1027-3	SMB-00	CCP SUCTION FROM VOLUME CONTROL TANK (VCT)	200/200	N/A	N/A /1.0	N/A /1.5	ACCEPTABLE	2,824 LB	13,170 LB	8,140 LB	32,376 LB
2-FCV-62-132 ANCHOR/DARLING, 4"-150# F/W GA, 1029-3	SMB-00	CCP SUCTION FROM VCT	200/200	N/A	N/A /1.0	N/A /1.25	ACCEPTABLE	2,824 LB	7,683 LB	10,686 LB	32,376 LB
1-FCV-62-133 ANCHOR/DARLING, 4"-150# F/W GA, 1029-3	SMB-00	CCP SUCTION FROM VCT	200/200	N/A	N/A /1.25	N/A /1.5	ACCEPTABLE	2,824 LB	11,831 LB	10,001 LB	32,376 LB

ATTACHMENT A
MOTOR OPERATED VALVE DATA SUMMARY TABLE
SEQUOYAH NUCLEAR PLANT
IE BULLETIN 85-03

VALVE ID	VALVE OPERATOR	VALVE FUNCTION	DESIGN BASIS DIFF PRESS OPEN/CLOSE	TEST DIFF PRESS OPEN/CLOSE (SEE NOTE #1)	AS FOUND TS SETTING OPEN/CLOSE (SEE NOTE #2)	AS LEFT TS SETTING OPEN/CLOSE	AS FOUND OPERABILITY (SEE NOTE #3)	REQ'D THRUST (CLOSING)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	MAXIMUM ALLOWABLE THRUST (CLOSING)
2-FCV-62-133 ANCHOR/DARLING, 4"-150# F/W GA, 1029-3	SMB-00	CCP SUCTION FROM VCT	200/200			N/A /1.5	ACCEPTABLE	2,824 LB	18,959 LB	10,644 LB	32,376 LB
1-FCV-63-29 ANCHOR/DARLING, 4"-1500# DD GA, 93-12805	SMB-0	CCP DISCHARGE TO BORON INJECTION TANK (BIT) INLET	2750/2750	2590/2590 PSI	N/A /2.0	N/A /2.0	ACCEPTABLE	15,812 LB	27,705 LB	27,705 LB	90,931 LB
2-FCV-63-39 ANCHOR/DARLING, 4"-1500# DD GA, 93-12859	SMB-0	CCP DISCHARGE TO BIT INLET	2750/2750	N/A	N/A /3.25	N/A /2.25	ACCEPTABLE	15,812 LB	21,253 LB	25,365 LB	90,931 LB
1-FCV-63-40 ANCHOR/DARLING, 4"-1500# DD GA, 93-12859	SMB-0	CCP DISCHARGE TO BIT INLET	2750/2750	2590/2590	N/A /2.5	N/A /2.0	ACCEPTABLE	15,812 LB	23,456 LB	23,331 LB	90,931 LB
2-FCV-63-49 ANCHOR/DARLING, 4"-1500# DD GA, 93-12859	SMB-0	CCP DISCHARGE TO BIT INLET	2750/2750	N/A	N/A /3.0	N/A /2.0	ACCEPTABLE	15,812 LB	17,998 LB	26,067 LB	90,921 LB
1-FCV-63-25 ANCHOR/DARLING, 4"-1500# DD GA, 93-12859	SMB-0	BIT OUTLET TO REACTOR COOLANT SYSTEM (RCS) COLD-LEG INJECTION FLOW PATH	2750/2750	N/A	N/A /3.0	N/A /3.0	ACCEPTABLE	15,812 LB	24,049 LB	22,836 LB	90,931 LB
2-FCV-63-25 ANCHOR/DARLING, 4"-1500# DD GA, 93-12859	SMB-0	BIT OUTLET TO RCS COLD-LEG INJECTION FLOW PATH	2750/2750	N/A	N/A /3.0	N/A /2.0	ACCEPTABLE (SEE NOTE #5)	15,812 LB	14,115 LB	28,693 LB	90,931 LB

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SEQUOYAH NUCLEAR PLANT
IE BULLETIN 85-03

VALVE ID	VALVE OPERATOR	VALVE FUNCTION	DESIGN BASIS DIFF PRESS OPEN/CLOSE	TEST DIFF PRESS OPEN/CLOSE (SEE NOTE #1)	AS FOUND TS SETTING OPEN/CLOSE (SEE NOTE #2)	AS LEFT TS SETTING OPEN/CLOSE	AS FOUND OPERABILITY (SEE NOTE #3)	REQ'D THRUST (CLOSING)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	MAXIMUM ALLOWABLE THRUST (CLOSING)
1-FCV-63-26 ANCHOR/DARLING, 4"-1500# SS GA, 93-12859	SMB-0	BIT OUTLET TO RCS COLD-LEG INJECTION FLOW PATH	2750/2750	N/A	N/A /1.0	N/A /2.75	INDETERMINATE	15,812 LB	INDETERMINATE	23,046 LB	90,931 LB
2-FCV-63-26 ANCHOR/ NLING, 4"-1500# SS GA, 93-12859	SMB-0	BIT OUTLET TO RCS COLD-LEG INJECTION FLOW PATH	2750/2750	N/A	N/A /3.0	N/A /2.5	ACCEPTABLE	15,812 LB	27,345 LB	25,235 LB	90,931 LB
1-FCV-62-93 VELAN, 3"-1500# GATE, 89403 2	SMB-00	CCP DISCHARGE TO NORMAL CHARGING PATH	2750/2750	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	7,2[illegible]	[illegible]9,231 LB	12,231 LB	30,000 LB
2-FCV-62-9[illegible] VELAN, 3"-1500# GATE, 88-43-2	SMB-00	CCP DISCHARGE TO NORMAL CHARGING PATH	2750/2750	N/A	N/A /1.0	N/A /1.25	ACCEPTABLE	7,263 LB	7,578 LB	10,981 LB	30,000 LB
1-FCV-62-91 VELAN, 3"-1500# GATE, 88-18	SMB-00	CCP DISCHARGE TO NORMAL CHARGING PATH	2750/2750	2200/2200 PSI	N/A /1.5	N/A /1.5	ACCEPTABLE	7,263 LB	10,734 LB	11,452 LB	30,000 LB
2-FCV-62-91 VELAN, 3"-1500# GATE, 88405-2	SMB-[illegible]	CCP DISCHARGE TO NORMAL CHARGING PATH	2750/2750	N/A	N/A /2.5	N/A /1.75	ACCEPTABLE	8,447 LB	8,723 LB	10,253 LB	30,000 LB
********** SAFETY INJECTION (SI) PUMPS / INTERMEDIATE-HEAD INJECTION SYSTEM **********											
1-FCV-63-5 ANCHOR/DARLING, 8"-150# F/W GA, 1028-38	SMB-00	COMMON SUCTION TO SI PUMPS FROM RWST	200/200	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	4,854 LB	9,306 LB	6,232 LB	24,629 LB

ATTACHMENT A
MOTOR OPERATED VALVE DATA SUMMARY TABLE
SEQUOYAH NUCLEAR PLANT
IE BULLETIN 85-03

VALVE ID	VALVE OPERATOR	VALVE FUNCTION	DESIGN BASIS DIFF PRESS OPEN/CLOSE	TEST DIFF PRESS OPEN/CLOSE (SEE NOTE #1)	AS FOUND TS SETTING OPEN/CLOSE (SEE NOTE #2)	AS LEFT TS SETTING OPEN/CLOSE	AS FOUND OPERABILITY (SEE NOTE #3)	REQ'D THRUST (CLOSING)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	MAXIMUM ALLOWABLE THRUST (CLOSING)
2-FCV-63-5 ANCHOR/DARLING, 8"-1500# F/W GA, 1026-96	E.B-00	COMMON SUCTION TO SI PUMPS FROM RWST	200/200	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	4,854 LB	10,493 LB	9,973 LB	24,629 LB
1-FC[illegible]-47 ANCHOR/DARLING, 6"-1500# F/W GA, 93-1345-1	SMB-00	SUCTION TO SI PUMP 1A-A FROM RWST	200/200	N/A	N/A /1.0	N/A /1.5	INDETERMINATE	3,561 LB	INDETERMINATE	7,040 LB	37,883 LB
2-FCV-63-47 ANCHOR/DARLING, 6"-1500# F/W GA, 93-1345-1	SMB-00	SUCTION TO SI PUMP 2A-A FROM RWST	[illegible]/200	N/A	N/A /1.5	N/A /1.25	ACCEPTABLE	3,561 LB	14,214 LB	7,[illegible]08 LB	37,883 LB
1-FCV-63-46 ANCHOR/DARLING, 6"-1500# F/W GA, 93-1345-	SMB-00	SUCTION TO SI PUMP 1B-B FROM RWST	200/200	N/A	N/A /1.0	N/A /1.5	ACCEPTABLE	3,561 LB	14,550 LB	10,781 LB	37,883 LB
2-FCV-63-46 ANCHOR/DARLING, 6"-1500# F/W GA, 93-1345-1	SMB-00	SUCTION TO SI PUMP 2B-B FROM RWST	200/200	N/A	N/A /1.5	N/A /1.0	ACCEPTABLE	3,561 LB	20,250 LB	7,573 LB	37,983 LB
1-FCV-63-152 VELAN, 4"-900# GATE, 88521-3	SMB-00	DISCHARGE FROM SI PUMP 1A-A TO COLD-LEG INJECTION FLOW PATH	1500/1500	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	7,410 LB	12,050 LB	12,[illegible]50 LB	24,000 LB
2-FCV-63-152 VELAN, 4"-900# GATE, 88521-3	SMB-00	DISCHARGE FROM SI PUMP 2A-A TO COLD-LEG INJECTION FLOW PATH	1500/1500	N/A	N/A /1.5	N/A /2.0	ACCEPTABLE	7,410 LB	10,462 LB	11940 LB	24,000 LB

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SEQUOYAH NUCLEAR PLANT
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VALVE ID	VALVE OPERATOR	VALVE FUNCTION	DESIGN BASIS DIFF PRESS OPEN/CLOSE	TEST DIFF PRESS OPEN/CLOSE (SEE NOTE #1)	AS FOUND TS SETTING OPEN/CLOSE (SEE NOTE #2)	AS LEFT TS SETTING OPEN/CLOSE	AS FOUND OPERABILITY (SEE NOTE #3)	REQ'D THRUST (CLOSING)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	MAXIMUM ALLOWABLE THRUST (CLOSING)
1-FCV-63-153 VELAN, 4"-900# GATE, 88121-3	SMB-00	DISCHARGE FROM SI PUMP 1B-B TO COLD-LEG INJECTION FLOW PATH	1500/1500	N/A	N/A /1.0	N/A /1.5	INDETERMINATE	7,410 LB	INDETERMINATE	13,745 LB	24,000 LB
2-FCV-63-153 VELAN, 4"-900# GATE, 88121-3	SMB-00	DISCHARGE FROM SI PUMP 2B-B TO COLD-LEG INJECTION FLOW PATH	1500/1500	N/A	N/A /1.0	N/A /2.0	ACCEPTABLE	7,410 LB	18,406 LB	15,147 LB	24,000 LB
1-FCV-63-22 ANCHOR/DARLING, 4"-1500# DD GA, 93-1280?	SMB-0	COMMON DISCHARGE FROM SI PUMPS TO COLD-LEG INJECTION FLOW PATH	1500/1500	1435/1435 PSI	N/A /2.0	N/A /2.0	ACCEPTABLE	11,870 LB	25,532 LB	25,532 LB	90,931 LB
2-FCV-63-22 ANCHOR/DARLING, 4"-15[illegible]# DD GA, 93-1280?	SMB-0	COMMON DISCHARGE FROM SI PUMPS TO COLD-LEG INJECTION FLOW PATH	1500/1500	N/A	N/A /1.5	N/A /2.5	UNACCEPTABLE (SEE NOTE #4)	11,870 LB	8,030 LB	25,555 LB	90,931 LB
********** AUXILIARY FEEDWATER (AFW) SYSTEM **********											
1-FCV-1-15 WALWORTH, 4"-600# GATE, A-6607-M-1158	DAB-00	STEAM GENERATOR (SG) LOOP 1 MAIN STEAM SUPPLY TO TURBINE-DRIVEN (TD) AFW PUMP TURBINE	1085/1085	N/A	N/A /1.5	N/A /1.0	INDETERMINATE	7,518 LB	INDETERMINATE	10,957 LB	50,321 LB
2-FCV-1-15 WALWORTH, 4"-600# GATE, A-6607-M-1152	SMB-00	SG LOOP 1 MAIN STEAM SUPPLY TO TD AFW PUMP TURBINE	1085/1085	N/A	N/A /1.0	N/A /1.5	ACCEPTABLE	7,518 LB	16,894 LB	12,994 LB	50,321 LB
1-FCV-1-16 WALWORTH,	SMB-00	SG LOOP 4 MAIN STEAM SUPPLY TO TD AFW PUMP TURBINE	1085/1085	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	7,518 LB	12,738 LB	12,738 LB	50,321 LB

ATTACHMENT A
MOTOR OPERATED VALVE DATA SUMMARY TABLE
SEQUOYAH NUCLEAR PLANT
IE BULLETIN 85-03

VALVE ID	VALVE OPERATOR	VALVE FUNCTION	DESIGN BASIS DIFF PRESS OPEN/CLOSE	TEST DIFF PRESS OPEN/CLOSE (SEE NOTE #1)	AS FOUND TS SETTING OPEN/CLOSE (SEE NOTE #2)	AS LEFT TS SETTING OPEN/CLOSE	AS FOUND OPERABILITY (SEE NOTE #3)	REQ'D THRUST (CLOSING)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	MAXIMUM ALLOWABLE THRUST (CLOSING)
4"-6008 GATE, A-6607-M-115B											
2-FCV-1-16 WALWORTH, 4"-6008 GATE, A-6607-M-115B	SMB-00	SG LOOP 4 MAIN STEAM SUPPLY TO TD AFW PUMP TURBINE	1085/1085	N/A	N/A /1.5	N/A /1.0	ACCEPTABLE	7,518 LB	16,539 LB	12,100 LB	50,321 LB
1-FCV-1-17 WALWORTH 4"-6008 GATE, A-6607-M-114A	SMB-00	SERIES ISOLATION VALVE FOR MAIN STEAM TO TD AFW PUMP TURBINE	1085/1085	N/A	2.0/2.5	N/A /1.75	INDETERMINATE	7,518 LB	INDETERMINATE	14,405 LB	50,321 LB
2-FCV-1-17 WALWORTH 4"-6008 GATE, A-6607-M-115B	SMB-00	SERIES ISOLATION VALVE FOR MAIN STEAM TO TD AFW PUMP TURBINE	1085/1085	N/A	1.0/1.0	N/A /1.25	ACCEPTABLE	7,518 LB	8,657 LB	11,141 LB	50,321 LB
1-FCV-1-18 WALWORTH 4"-6008 GATE, A-6607-M-115A	SMB-00	SERIES ISOLATION VALVE FOR MAIN STEAM TO TD AFW PUMP TURBINE	1085/1085	N/A	2.0/1.5	N/A /1.5	ACCEPTABLE	7,518 LB	14,462 LB	14,462 LB	50,321 LB
2-FCV-1-18 WALWORTH 4"-6008 GATE, A-6607-M-115A	SMB-00	SERIES ISOLATION VALVE FOR MAIN STEAM TO TD AFW PUMP TURBINE	1085/1085	N/A	1.5/1.5	N/A /1.5	ACCEPTABLE	7,518 LB	22,026 LB	12,632 LB	50,321 LB
1-FCV-1-51 SCHUTTE KOERTING, 3"-9008 TRIP/ THROTTLE VALVE	SMB-000	TRIP AND THROTTLE VALVE -INLET TO TD AFW PUMP TURBINE	1105/1105	N/A	N/A /1.0	N/A /1.0	ACCEPTABLE	1,000 LB	3,676 LB	3,676 LB	5,000 LB
2-FCV-1-51 SCHUTTE KOERTING, 3"-9008 TRIP/ THROTTLE VALVE	SMB-000	TRIP AND THROTTLE VALVE -INLET TO TD AFW PUMP TURBINE	1105/1105	N/A	N/A /2.0	N/A /1.0	INDETERMINATE	1,000 LB	INDETERMINATE	2,283 LB	5,000 LB

ENCLOSURE 2

SQN's two remaining commitments for final resolution of IE Bulletin 85-03 are items 6 and 8, contained in TVA's May 12, 1986 response. Item 6 has been restated to indicate that testing would be performed during unit 2 restart rather than after unit 2 restart. Item 8 contains a revised completion date of March 31, 1988.

6. Stroke test 1 MOV in each of the test categories 4 and 5 (reference attachment 1 of SQN's May 12, 1986 response) under full-flow DP conditions (total of 2 MOVs) during TD AFW pump surveillance testing during unit 2 restart.

8. After issuing a design output document (item 7), revise plant procedures to incorporate these requirements before startup from the unit 2 cycle 3 refueling outage but no later than March 31, 1988.