TENNESSEE VALLEY AUTHORITY CHATTANOOGA, TENNESSEE 37401 5N 157B Lookout Place FEB 12 1988 U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D.C. 20555 Gentlemen: Docket Nos. 50-327 In the Matter of 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 IB 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, Director Nuclear Licensing and Regulatory Affairs

Enclosures cc (Enclosures):

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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

- 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 wadge 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

- SQN aggreed 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.
- 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.
- 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 /

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. Thus commitment was completed as required on November 27, 1987.

Item 8

After issuing a design cutput 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 71, 1988. SQM's present procedure (MI-10.43) contains conservative required thrust values. This will ensure that value operability (proper torque swit , settings) is maintained.

Item 9

Delece the opening torque/torque bypass switches on 2, 2-FCV-1-17, -18, and -51 by August 31, 1936.

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 there 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.

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ATTACHENT A MOTOR OFERRIED VALVE CATA SUMMERY TABLE SEQUENCH NUCLEAR PLANT TE BALLETTY 85-03

62 18 18	VALUE (FERATOR	SRVE FUNCTION	DIFF PRESS OFF WILLDSE	TEST DIFF PRESS OPEN/CLUSE CYE NOTE »)	TEST AS FOLNO DIFF PRESS TS SETTING JPEN/LLCSE (DPEN/L_OSE 195E NOTE AS 145E ADTE & RA	AS LEFT TS SETTING OPEN/CLOSE	BS FOUND DESKRILLTY CZE NOTE BOX	REG"D THRUST (CLGS:NS)	AS FOUND THRUST (CLOSINS)	AS LEFT THGUST ICLOST-S)	SAT PUT PULKABLE THRUST CLUSSINS:
**************************************	CENTRE SEAL CHARSTILE PLAY (CCF)	16 PURP (CCP) / 41SH-4640 INJECT;ON SYSTEN ********	INTELTION SY	STEN MARKET						94 14 15 15 15 15 15 15 15 15 15 15 15 15 15	
1-1:30-52-135	\$18-00	COP SUCTION FROM RNST	2007/200	N/A	N/A/1.5	M7A 71.8	INDETERMINATE	4,254 .8	4,854 LB INDETERMINATE	12,123 LB	84,629 18
	12.00										
2-1(4-52-135 84(-08, 080.186, 97-153# F/# E'1, 1655-3	O-80	CCP SUCTION FROM REPULLING MATER STORAGE TANK (98.37)	2017200	65 575	N/R / 1.0	N:B 71.0	ACCEPTABLE	4,854 18	87 625'11 81 458't	11,520 18	24,629 18
1-10-42-136 author/tak imp, e-159e f.m. 3a, 11-66-3	80-826	CCP SUCTION FROM RWST	2007/200	d X	W^ /11.0	K/A /1.0	*CCEPTABLE	4,854 LB	4,854 LB 12,143 LB	12,143 18	£1 629 12
2-(C-02-036 aNCHO/DARLING, 8-570* F/W GA, 1029-3	00-845	CCF SUCTION FROM BHST	200/200	N/A	N/A /1.0	M/A /1.5	ACCEPTABLE	4.854 LB	4.854 LB 10,639 LB	10,635 L8	87 659 18
1-FCV-62-132 R2CHCF/04BLSHS, 47-1508 F/W 6A, 131-13	00-845 4	CCP SUCTON FROM VOLUME CONTROL TASY (VCT)	962/902	8/8	N/A /1.0 N/A /1.5		ACCEPTABLE	2,624 18	2,624 18 13,170 18	8,140 18	32,376 18
2-P.CV-S2-132 	00-BNS	CCP SUCTION FROM VCT	200/200	M/R	N/A /1.0	N/4 /1.25 ACCEPTABLE	ACCEPTAR! E	2,824 18	87 689'L 81 +28'2	10,686 LB	87.776.18
1. FCV -62-133 2NCHDR/DARLING, 4*-1509 F/W GA, 1029-3	SAE-00	CCP SUCTION FROM VCT	200/200	M/A	N/A /1.25 N/A /1.3		ACCEPTABLE	5,624 18	2,824 LB 11,831 LB	10,001 L8	E,376 LB

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ATTOCHEN'S A MOTOS GFRARY TASLE SEGRERY TASLE SEGRERY FANT SEGRETAN 85-02

0. Je. 5	JALUE C. PRATUR VA	VALVE FUNCTION	DESIGN BASIS DIFF PRESS OF CN. CLOSE	DIFF FRESS DPEN/CLOSE (SEE NOTE #1)	DIFF PRESS TS SETTING OPENZLUSE TPENZLUSE TPENZLUSE TPENZLUSE TPENZLUSE TREATERS	AS LETT TS SETTING OFEN/0.05E	AS FOUND OPENABILITY (SEE NOTE #3)	REQ") IPHUST (CLGS"NS)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	NGELMON ALEMANE THRUST TOTAL
2-TV-52-133 ACHOS/TORLING, A' 150* TH 66,	8	CCP SUC.:10N FROM VCT	506/200			N.R. 11.5	ACCEPTABLE	2,824 18 18,959 18	8,959 18	10,644 1.8	R,376 LB
1 FCV-63-29 6ACHGL7548L186, 4 - 15309 DS 64, 91-12859	9	CCP DISCHARGE TO PROBLEM INC. THE	2750/2750	2590/2590 PSI N/A /2.0	I N/A /2.0	N/A /2.0	ACCEPTABLE	81 202 / 28 51 218 / 51	23,705,18	27,705 CE	e7 1881 rs
2-FCV-63-39 RFCHOR-38R-Lists, 4 - 15C# DD 84, 73-12859	6-348-3	CC DISCHARGE TO 917 INLET	2750/2750	87.8	N/A /3.25	N/A /2,25 ACEFIANCE	ACCEPTABLE	15,812 LB 21,253 LB	1,733 LP	25,365 L8	67 '66' 68
1-751-63-46 BACHOR DARLING, 41-3508 30 54, 93-12859) N	CCP 015CHARGE TO BIT INLET	2750/2750 2590/2390	2596/2590	N/A /c.5	N/A /2.0	ACCOPTABLE	15,812 (8 23,456 (8	87 929 18	23,331 LB	60°631 TE
2-FCV-65-4-1 GRCHOD CD-8, 1N6, 47-12504 DD GA, 93-12-559	0-945	COP DISCHARGE TO BIT INLET	6.50/2750	N/E	K.A /3.0	N/A /2.0	ACCEPTABLE	15,512 (.8 17.998 L8	87 866 2	26,067 LB	60,921 13
1-CV-63-55 AACHDE,DETCSMG, 47-1500# DB EA, 93-12859	9K-0	EST DIVERT TO RIACTOR CODEANT SYSTEM (CCS) COLO-LEG INDESTOR FLOW PATH	2750/2750	8/8	N/A 73.0	WA 72.0	ACCEPTABLE	12,512 18 24,049 18	87 646 FB	22,836 L6	中 175'06
2-CV-63-23 RRO-DE/24RLING, 41-15/09 EB 5A, 93-12859	SrB-0	BIT CUTLET TO RES COLD-LES INSECTION FLOW PATH	2750/2750	W/R	N/A /3.0	N/A /2.0	ACCEPTABLE (SEE NOTE #5)	15,812 18 14,115 18	4,115 UB	28,653.9	90,93: 18

ATTACHENT A
MOTOR OPCARTED VALVE DATA SUMMARY TABLE
SLEUDYAH NUCLEAR PLANT
IE BULLETIN 85-03

WLVE ID	WALVE ID VALUE OFERATOR 94	VALUE FUNCTION	DESTSN BASIS DI-F PRESS OPEN/CLOSE	DIFF PRESS DIFF RESS DPEN, CLOSE (SEE NOTE *1)	TEST AS FOUND DIFF PRESS IS SETTING (PPIN, CLOSE OPTS, CLOSE SSEE NOTE **(1) 455E NOTE #2)	AS LEFT TS SETTING DPEN/CLOSE	AS FOUND DPERABILITY ISTE 197E #31	RED'D THRUST KCLOSINS)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CL3STNS)	MATINUM ALLOWABLE THRUST (CLOSÍNG)
1-407-63-26	7	ETT DUTLET TO RCS	2750/2750	N/A	N/5 /1.0	N/A /2.75	N/A /2,75 INDEFERMINATE	15,612 (3	15,812 LO INDETERMINATE	23,046 18	87 1E5'06
AL-01 DR-13K, -15.34 65 69, 93-2855		FLOW PATH									
27-24-124-24-24-24-24-24-24-24-24-24-24-24-24-2	D-H-S	817 QUILLT 10 RCS COLD-LEG TURETION FIFE DATE	2750/2750	N/R	N/A /3.6	N/A /2.5	ALCOPTABLE	15,812 (8	15,812 L8 27,345 L9	25,235 11	67 166,09
4*-1500# 00 3#. 93-12855											
HG-82-80 (E.M.) 9-15.4 CHE, 884.5 E	376-40	COF DISCHARGE TO NOSHALL CHARGING PATH	2750,000	N/A	N/A /1.0	A'S /1.0 ALESTANE	KEEFTARLE	2,2	A : 2.231 LB	12,231 15	30,000
24-5 85-8; MLM, 31-1550 8FE, 38-5-2	8 mg	LCP DISCHARSE TO NORTH CHESTING IA 9	2756/2750	8/8	N/4 /1.6	N/8 /1.25 A	ACCETABLE	7,263 LB	7,263 LB 7,578 LB	10,981 LB	87 600°0E
1-524-52-9; :5146. 3"-154.8 GHE, 66-18	01-63. 53.	CCF DISCHARGE TO NOSYAL CHARGE & PATH	2750/2750	2750/2750 2250/2203 FSI N/A /1.5		Ka 71.5	ACCEPTABLE	7,263 L8	7,863 LB 10,734 LB	11,482 LI	87 000'05
2 F.S 62-31	2.0	U 1.85-44.3 10	275)/16750	8.8	114 12.5	N/A /1.75	ACCEPTABLE	8,447 1.9	8.723 LB	10,255 16	31,000,02
VEL46, 3*-1504 GATE, 68415-2		Hard Strong Service									
mornina Silve	· INCECTION (S.)	********* SALELY INCETION (S.) AURS / INCERNEDALE HERD INJECTION SYSTEM MANAGEMENT	CAS INJECTION	SYSTER MAN	******				A		
1-504-63-5	548-10	COCHEN SUCTICS TO	2(0/2)0	K/A	N/8 /1.5	Nr. 11.0	ACCLPTABLE	4,854 (8	4,854 LB 9,536 LB	6,232 8	87 629 18
ANCHOR/DAR, ING. 8-1508 F/4 BH, 1028-38											

ATTACHENT A MOTOR OPERATED VALVE DATA SUMMERNY TABLE SEBUDYAA NUCLERA PLANT TE SULLETTN 85-03

CALVE 10 Yn C O'TBUEGA	COTTRATOR WALVE FUNCTION	DESIGN BASIS DIFF FRESS OFEN/CLOSE	TEST DIFF PRESS DPEN/CLOSE (SEE NOTE NI)	TEST AS FOUND DIFF PRESS TS SETTING DPENICLOSE OPENICLOSE SEE NOTE #1145E2 NOTE #2)	AS LEFT IS SETTING OPEN/CLUSE	AS FOUND DREAL-TRITY (SET NOTE 43)	REV'D TARUST (CLUSING)	AS FOUND THRUST (CLOSING)	AS LEFT THRUST (CLOSING)	MGXIMUM ALLOWBLE THRUST (CLOSING)
2-FCW-63-2 E.8-00 #WCHOR:DERLING, 9*-155# 7.N. 34, 1,256-38	COMPON SOCITOR TO	200/200	R/A	N/A /1.0	N/R /1.0	BLLCP1ABLE	4,834 18	97 624 19 10*453 78	9,973 LB	24,629 18
2-F2 , 47 SME-00 awcmdx-prelates, 5*-15.a F7x G8, F3-13-53	SUCTION TO ST PUMP 14 A FROM RAST	506/200	4/8	N/E /1.0	N/A /1.5	INDETERMINATE	3,551 18	3,551 LB INDETERMINATE	7,040 19	91 (88.16
2 FCV-63-47 SMS-00 -MCHSK/SMS(3MS, 6*-1508 F/M GA, 53-13-31	SECTION TO ST PUMP Seign Fadministra	******	A/A	N/A /11.5	878 71.25	AL.EPTABLE	3,561 1.6	3,561 L8 14,214 L8	7,408 LE	37,863 18
1-F.N-63-49 SNB-00 F.K.HURTSORLINS, 6*1508-F/H 58, 50-1519-3.	SACTION TO ST FUMP .8-E FADM 8451	206 50	N/A	N/R /1.6	2 1/ E/W	ACTEPTABLE	3,255 1.8	3,554 48 14,550 48	:0,78! (8	37,882 LB
2-FCV-65-46 SNE-30 -AKPORIO-4, 146. 1500 F.H. 54. 91-13-51	SUCTION TO ST PUMP 28-9 FROM RNST	206/200	N/A	N/8 /1.5	W. 71.6	ACCET TABLE	3,561 L8	3,581 L8 26,250 L8	7,573 L8	87 596'46
1.53-63-152 Sn6-40 WLAN, 4-4008 SATE, 68221-3	CLISCHANGE FROM SI PLAY JA-9 TO COLD-LES INJECTICN FLUR PAIN	1500/1506	N/A	N/A 71.0	N/A /1.0	ACC271ABLE	7,410 LB	7,410 LE :2,050 LB	81 02/21	54 000 18
2 3'-63-152 S76-0v VEURA, 4"-9308 SATE, 86521-3	DISCHARGE FROM SI PLIFF 28-4 TO CALO-LEG INJECTION FLOW PRIN	1500/1500	N/A	N/A /1.5	N/A /2.0	PCCF758CE	7,410 LB	7,410 LB 10,462 LB	11940 L8	87 02°'52

ATTACHENT A
MUTOR OPERATED VALVE DATA SUMMARY TABLE
SEBUDYAH MUCLEAN FLANT
TE BULLETIN 85-39

				IE BULLETIN 85-33	73						
27 West 12	THE PURCEING THE PURCHING THE PURCHING	JALVE FUNCTION	DESIGN BASIS LIFF PRESS OPEN/CLOSE	DIFF PRESS IS SETTING DFENZLOSE OPENZLOSE (SEE NOTE #11/5/5/ ACTE #2)	AS FOLND TS SETTING DPENVELOSE (SEE NOTE 45	AS LEFT TS SETTING THEN SLOSE	AS FOUND DPESABILITY ISEE NOTE #3)	REQ'D THRUST (CLCSING)	AS FOUND THE LIST OF DISTANCES	AS LEFT THRUST (CLOSTAGE	NAZIMUN ALLOMOBIE THRUST (C. 381NG)
1-170-65-153 ULLAs, **-90.0 0215,	3	2)35/48/86 F30f SI 2/35/48/86 F30f SI 3/3/56/3/8/ F1.3% PATH	1560/1500	:	W4 /1.9	8/4 /1.5	INDETERCINATE	7,410 LB	7,410 LB INDETERMINATE	13,7% 1.8	24,000 LB
2-13-45-53 45-44, 4-304-5416, 68231-3	74 - 97.	215.0448EE FRON SI LIM 28-5 10 2012-168 PAZECTION F. 24 PAPH	1593/1530	N/B	N/A /11.0	N/4 /2.0	ACCEPTION.E	7,410 L8	7,415 LB 18,406 LB	15,147 (8	54,000 LB
1473-42-27 ANNELLIALIA 1-1514 PD 64, N-1685*	Ř	COMPON DISCHARGE FROM 1500/150 SI PUMPS TO COLD-LEG see rote WASCIICH FLCW MACH	9 1	1435/1435 PSI K/A /2.0	N/A /2.0	K/# /2.0	ACCEPTABLE	11,870 te 25,382 te	2,522 16	22,532 16	87 156*06
27.0v 62-22 24.046.056.05.05. 2-3-4-19-34.	ŝ	COMON DISCHARGE FROM SI - UN'S TO COLO-LEG - INJECTION FLOA - 28TH	1500/1500	A/A	N/A /1.5	6/4 /2.5	UNACCEPTABLE (SEE KOTE 84)	11,370 L8 8,650 L8	81 050 '8	25,555 LE	67,931 LB
1-70-1-15 	1987 FEELLATER GA		1965/1985	A A	25. 15. 44. 25. 15. 44.	0.10	319K W22,34KI	7,518 1.8 1	7,555 LR INDETERMINATE	80,957 1.9	ยายกร
2-FCV-1-15 WALDETF. 4'-6006 SRTE. A-6607-R-1158	5%-C	SE LEDP I MEIN STEAM SUPPLY TO TO AND FLOY TOWERS	1085/1685	87.8	17.8 /1.0	N.9.71.5	PLEFTALE	7,518 (8 14,804)	1. \$58,6	97 856'21	9,21.13
1-F2V-1-16 WALKORTH,	Sr.E-30	50 100P 4 WITH STEWN 50 PRLY TO TO AFA FUNE TURNETHE	1035/1065	N/A	3.4 /1.0	N/A /1.0	ACCEPTABLE	7,518 LB 12,732 LB	2,732	12,732 18	20,321 18

NOTON OPERATES VALVE DATA SUMMARY TABLE SEQUENCY RUCLEAR PLANT TE BICLETTM 85-03

								- 1
ALLOWALE THRUST (CLOSING)		50,321 LB	50,321 LB	20,321 LB	80,321 L6	. 30,321 LB	2,000,2	a more
NS LETT TRAUST (CLOSING)		12,100 18	14,405 LB	87 IV!'II	14,462 1.8	12,632 LB	3,676 18	6,230 19
AS FOUND THRUST (CLOSING)		7,518 18 16,539 18	7,518 LB INJEKERNINGTE	7,518 LB 8,657 LB	7,518 18 19,42 18	7,519 18 22,026 18.	} 81 927°; 81 000°1	1,900 Lb INZETERMINATE
AS FOUND REG'D OPERABILITY THRUST (SEE NOTE B3) (CLOSIM		ACCEPTABLE	INCETERNINGTE	ACCEPTENT	ACCEPTABLE	ACCEPTABLE	ACCEPTABLE	INDETERMINATE
AS LEFT TS SETTING OPEN/CLOSE O		NA 71.9	NA 71.75	N/A /1.25	8/4 /1.5	N/A /1.5	N/A /1.0	N/A /1.0
TEST AS FOUND DIFF PRESS IS SETTING OPERATORS OFFICIOSE OF		N/A /1.5	2.072.5	1.0/1.0	2.0/1.5	1.5/1.5	N/A /1.0	N/A /2.0
TEST DIFF PRESS OPEN/CLOSE (SEE NOTE BITH		8/8 5/2	N/N	K/A	N/A	K/A	N/A	M/A
DESIGN BASIS DIFF PRESS D OPEN/CLOSE O		1085/1085	1085/1085	1985/1085	108211082	1065/1085	£ 1105/1105	VE 1105/1105
VALVE FUNCTION 0	4-8008 64E, A-6307 7-1138	SG LODP & THIN STERN SUPPLY TO TO AFM FURP TLABINE	SERIES ISOLATION VALVE 1085/1085 FOR FALV STEAM TO TO AFM FUMP TURESNE	SERIES ISOLATION VALVE FUR RAIN STEAM TO TO 67W PUMP TURSINE	SERIES ISOLATION VALVE FOR HAIM STEAM TO TO APW FUNY TURBINE	SERIES ISOLATION VALVE FOR FACE STEAM TO TO APK FULP TURBINE	TETP AND THROTILE VALVE 1105/1105 - MET TO TO ATH PUMP TURFINE	TRIP AND THROTTLE VALVE 1105/1105 - IM.ET TO TO AFY PUMP
VALVE DPERATOR		97-845	27- 916	38-9KS	92-945	8	000-6KS	SMB-000
VALVE 13	4-5004 6ATE, A-507-6-1158	2-FCV-1-16 SK.KORTH, V-600 SATE,		2-5CV-1-17 MALMOSTH N*-3608 GRIE,	1-FCU-18 MAINDRIM 4*-E038 SATE, A-36C7-N-115F	2-FCV-1-18 WALMORTH 4*-6009 GATE, C: 9607-7-1154	1-FCV-1-51 SCHOTTE SCHOTTE 37-500 TRIP	F-EV-1-51

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 <u>during</u> unit 2 restart rather than <u>after</u> 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.