TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401

TVA 40TH ANNIVERSARY OF PEOPLE IN PARTNERSHIP

November 14, 1973

Mr. Norman C. Moseley, Director
Directorate of Regulatory Operations
U.S. Atomic Energy Commission
Region II - Suite 818
230 Peachtree Street, NW.
Atlanta, Georgia 30303

Dear Mr. Moseley:

This is in further response to DRO Region II letter RO:II:50-259, 50-260, 50-296, and 50-327, 50-328, dated December 4, 1972, on the subject of Limitorque valve operator failures. This response concerns Browns Ferry Nuclear Plant unit 3.

Enclosed is a list, by system, of Browns Ferry unit 3 motor-operated valves showing those requiring corrective action to the torque switch torsion spring. Corrective action will be completed on a schedule to allow DRO review of the work before fuel loading in unit 3. The valves bearing the indication "later" are still in the procurement process; therefore, the operator information is not available. We will, however, assure they have the correct operators.

Very truly yours,

J. E. Gilleland

J. E. Gilleland
Assistant to the Manager of Power

Enclosures

50-259/260/296
327/328
R.B. 22-3

OFF GAS SYSTEM (System Code 66)

VALVE TAG NO.	TVA MARK NO OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-66-2	47W405-5	SMB-000	338305A	99197A	NO	NA	YES
FCV-66-3	47W405-5	SMB-000	338305A	99201A	NO	NA	YES
FCV-66-4	47W405-5	SMB-000	338305A	99200A	NO	NA	YES
FCV-66-5	47W405-5	SMB-000	338305A	99199A	NO	NA	YES
FCV-66-6	47W405-5	SMB-000	338305A	99202A	NO	NA	YES
FCV-66-7	47W405-5	SMB-000	338305A	99202A	NO	NA	YES
FCV-66-10	47W405-1	SMB-000	337753A	112362	NO	NA	YES
FCV-66-30	47W373-5	DAMPER ONLY					
FCV-66-32	47W373-6	DAMPER ONLY					
FCV-66-34	MOV-D1	SMB-000	345086A	112374	NO	NA	YES
FCV-66-35	MOV-D2	SMB-000	345086A	112374	NO	NA	YES
FCV-66-36	47W405-6	SMB-000	338070A	99185A	NO	NA	YES
FCV-66-45	47W373-7	DAMPER ONLY					
FCV-66-47	47W373-8	DAMPER ONLY					
PCV-66-1A	PCV-66-1A	SMB-00	341366	119270	NO	NA	YES
PCV-66-1B	PCV-66-1B	SMB-00	341366	119269	NO	NA	YES
FCV-66-40	47W405-6	SMB-000	338468B	100827	NO	NA	YES
FCV-66-72	47W405-55	Later					
FCV-66-78	47W405-50	Later					
FCV-66-85	47W405-55	Later					
FCV-66-91	47W405-50	Later					

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-66-1 through -6 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

SUBMITTED | RECOMMENDED | APPROVED

VALVE TAG NO.	TVA MARK NO OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-67-25	47W451-5	SMB-000	347414A	117757	NO	NA	YES
FCV-67-26	47W451-5	SMB-000	347414A	117756	NO	NA	YES

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-67-1 through -6 ---- Instrument Tabulation

POWERHOUSE AND PUMPING STA
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

SUBMITTED | RECOMMENDED | APPROVED

REACTOR RECIRC SYSTEM (System Code 68)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-68-1	GE-2-43A	SMB-2	336767	107916	NO	NA	NO
FCV-68-3	GE-2-53A	SMB-3	329731B2	85500A	NO	NA	NO
FCV-68-4	GE-2-54A	SMB-000	329731E4	101854	NO	NA	YES
FCV-68-33	GE-2-65B	SMB-2	334361E	103702	NO	NA	NO
FCV-68-34	GE-2-66B	SMB-000	329731B5	101856	NO	NA	YES
FCV-68-35	GE-2-65A	SMB-2	334361E	103703	NO	NA	NO
FCV-68-36	GE-2-66A	SMB-000	329731E5	101855	NO	NA	YES
FCV-68-77	GE-2-43B	SMB-2	336767	107915	NO	NA	NO
FCV-68-79	GE-2-53B	SMB-3	329731G2	121744	NO	NA	NO
FCV-68-80	GE-2-54B	SMB-000	329731G4	120762	NO	NA	YES

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-68-1 through -14 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

REACTOR WATER CLEANUP SYSTEM (System Code 69)

VALVE TAG NO.	TVA MARK NO OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-69-1	GE-12-15	SMB-00	361135E	149408	YES	NA	NO
FCV-69-2	GE-12-16	SMB-00	361135F	149739	YES	NO	NO
FCV-69-8	GE-12-74	SMB-00	361135B	149405	NO	NA	NO
FCV-69-12	GE-12-68	SMB-00	361135C	149406	YES	NA	NO
FCV-69-14	GE-12-53	SMB-00	361135A	149404	NO	NA	NO
FCV-69-16	GE-12-56	SMB-00	361135D	149407	NO	NA	NO
FCV-69-17	GE-12-57	SMB-00	333688D	94097A	NO	NA	YES

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-69-1 through -9 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY

REACTOR BUILDING CLOSED COOLING WATER SYSTEM (System Code 70)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-70-47	GE-50-87	SMB-00	359851A	149234	NO	NA	NO
FCV-70-48	47W464-1	14A	ROTORK	S2425	NA	NA	NA
FCV-70-69	47W464-1	14A	ROTORK	S2419	NA	NA	NA
FCV-70-70	47W464-1	14A	ROTORK	S2422	NA	NA	NA

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-70-1 through -8 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

REACTOR CORE ISOLATION COOLING SYSTEM (System Code 71)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-71-2	GE-13-15	SMB-00	336790F	146092	YES	NA	NO
FCV-71-3	GE-13-16	SMB-00	336790D	145326	YES	NO	NO
FCV-71-8	GE-13-131	SMB-0	360470A	160960	YES	NO	NO
FCV-71-9		SMB-000	330732A	81557A	NO	NO	NO
FCV-71-17	GE-13-41	SMB-00	336790E	146898	YES	NO	NO
FCV-71-18	GE-13-39	SMB-00	336790E	146897	YES	NO	NO
FCV-71-19	GE-13-18	SMB-00	336790B	146051	YES	NO	NO
FCV-71-25	47W456-301	SMB-000	345791A	115295	YES	NO	YES
FCV-71-37	GE-13-20	SMB-1	336790G	146648	YES	NO	NO
FCV-71-38	GE-13-30	SMB-1	336790C	146896	YES	NO	NO
FCV-71-39	GE-13-21	SMB-1	336790G	146647	YES	NO	NO
FCV-71-34	47W456-301	SMB-000	345791A	115296	YES	NO	YES

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-71-1 through -6 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

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HIGH PRESSURE COOLANT INJECTION (System Code 73)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-73-2	GE-23-15	SMB-2	331762B	102866	YES	NA	NO
FCV-73-3	GE-23-16	SMB-2	331762A	104401	YES	NO	NO
FCV-73-16	GE-23-14	SMB-2	331762A	104402	YES	NO	NO
FCV-73-18			HYDRAULIC			—	
FCV-73-26	GE-23-58	SMB-0	334533A	118591	YES	NO	NO
FCV-73-27	GE-23-57	SMB-0	334533A	118590	YES	NO	NO
FCV-73-30	47W455-405	SMB-0	335957A	113000	YES	NO	NO
FCV-73-34	GE-23-20	SMB-4T	331762D	104127	YES	NO	NO
FCV-73-35	GE-23-21	SMB-4T	336716C	111792	YES	NO	NO
FCV-73-36	GE-23-24	SMB-2	361135G	149527	YES	NO	NO
FCV-73-40	GE-23-17	SMB-0	331762C	102984	YES	NO	NO
FCV-73-44	GE-23-19	SMB-4T	331762D	104126	YES	NO	NO

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-73-1 through -7 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

RESIDUAL HEAT REMOVAL SYSTEM (System Code 74)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-74-1	GE-10-13A	SMB-1	336801G	142292	YES	NA	NO
FCV-74-2	47W452-415	SMB-0	335965A	119109	YES	NA	NO
FCV-74-7	47W452-410	SMB-000	335965A	111431	YES	NA	YES
FCV-74-12	GE-10-13C	SMB-1	336801G	142290	YES	NA	NO
FCV-74-13	47W452-415	SMB-0	335965A	119108	YES	NA	NO
FCV-74-24	GE-10-13B	SMB-1	336801G	142289	YES	NA	NO
FCV-74-25	47W452-415	SMB-0	335965A	119107	YES	NA	NO
FCV-74-30	47W452-410	SMB-000	335964A	11696	YES	NA	YES
FCV-74-35	GE-10-13D	SMB-1	336801G	142291	YES	NA	NO
FCV-74-36	47W452-415	SMB-0	335965A	119110	YES	NA	NO
FCV-74-46	47W452-405	SMB-2	335953A	112602	YES	NA	NO
FCV-74-47	GE-10-17	SMB-3	336801F	144291	YES	YES	NO
FCV-74-48	GE-10-18	SMB-2	336801E	146451	YES	NA	NO
FCV-74-52	GE-10-154A	SMB-5T	332194K	94156A	YES	NA	NO
FCV-74-53	GE-10-25A	SMB-4	336801H	144337	YES	NA	NO
FCV-74-57	GE-10-39A	SMB-2	336801D	143018	YES	NA	NO
FCV-74-58	GE-10-38A	SMB-00	336801L	142198	YES	NA	YES
FCV-74-59	GE-10-34A	SMB-2	336801J	143071	YES	NA	NO
FCV-74-60	GE-10-26A	SMB-2	336801C	144907	YES	NA	NO
FCV-74-61	GE-10-31A	SMB-2	336801C	144910	YES	NA	NO
FCV-74-62	47W452-414	SMB-00	347695A	128515	NO	NA	YES
FCV-70-63	47W452-414	SMB-00	347695A	128514	YES	NA	YES
FCV-74-66	GE-10-154B	SMB-5T	332194K	94157A	YES	NA	NO
FCV-74-67	GE-10-25B	SMB-4	332194H	02550A	YES	NA	NO
FCV-74-71	GE-10-39B	SMB-2	336801D	143017	YES	NA	NO

*Remove torque switch from opening circuit.

Reference Drawings:
47E601-74-1 through -14 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

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RESIDUAL HEAT REMOVAL SYSTEM (System Code 74)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-74-72	GE-10-383	SMB-00	336801E	142197	YES	NA	YES
FCV-74-73	GE-10-343	SMB-2	336801D	143070	YES	NA	NO
FCV-74-74	GE-10-263	later					
FCV-74-75	GE-10-313	SMB-2	336801C	144908	YES	NA	NO
FCV-74-77	GE-10-33	SMB-00	336801A	144425	YES	NO	NO
FCV-74-78	GE-10-32	SMB-00	336801B	144906	YES	NA	NO
FCV-74-96	47W452-403	SMB-00	347698A	125217	YES	NA	YES
FCV-74-97	47W452-402	SMB-00	347697A	124340	YES	NA	YES
FCV-74-100	47W452-407	SMB-00	335963A	119105	YES	NA	YES
FCV-74-104	47W452-412	SMB-00	347698A	125220	NO	NA	YES
FCV-74-106	47W452-412	SMB-00	347698A	125219	NO	NA	YES
FCV-74-108	47W452-424	SMB-0	347700A	127208	NO	NA	NO

*Remove torque switch from opening circuit.

Reference Drawings:
47E601-74-1 through -14 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

VALVE TAG NO.	TVA MARK NO OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-75-2	GE-14-7A	SMB-0	336790A	143712	YES	NA	NA
FCV-75-9	GE-14-68A	SMB-00	350346A	124835	YES	NA	YES
FCV-75-11	GE-14-7C	SMB-0	336790A	143713	YES	NA	NA
FCV-75-22	GE-14-26A	SMB-2	330639B	83090A	YES	NA	NA
FCV-75-23	GE-14-11A	SMB-2	330639A	82168A	YES	NA	NA
FCV-75-25	GE-14-12A	SMB-2	330639A	82173A	YES	NA	NA
FCV-75-30	GE-14-7B	SMB-0	336790A	143714	YES	NA	NA
FCV-75-37	GE-14-68B	SMB-00	350346A	124836	YES	NA	YES
FCV-75-39	GE-14-7D	SMB-0	336790A	143715	YES	NA	NA
FCV-75-50	GE-14-26B	SMB-2	330639B	83092A	YES	NA	NA
FCV-75-51	GE-14-11B	SMB-2	330639A	82170A	YES	NA	NA
FCV-75-53	GE-14-12B	SMB-2	330639A	82171A	YES	NA	NA

*Remove torque switch from opening circuit.

Reference Drawings:
47B501-75-1 through -6 ---- Instrument Tabulation

POWERHOUSE
UNIT 2

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

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FUEL POOL COOLING AND DEMIN SYSTEM (System Code 78)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-78-61	47W454-460 47W454-460A	ROTORK MOTOR OPERATOR			NA	NA	
FCV-78-62	47W454-12	ROTORK MOTOR OPERATOR			NA	NA	
FCV-78-63	47W454-45 47W454-45A	ROTORK MOTOR OPERATOR			NA	NA	
FCV-78-64	47W454-46	ROTORK MOTOR OPERATOR			NA	NA	
FCV-78-65	47W454-37 47W454-37A	ROTORK MOTOR OPERATOR			NA	NA	
FCV-78-66	47W454-40	ROTORK MOTOR OPERATOR			NA	NA	
FCV-78-67	45W454-15 45W454-15A	ROTORK MOTOR OPERATOR			NA	NA	
FCV-78-68	47W454-16	ROTORK MOTOR OPERATOR			NA	NA	

*Remove torque switch from opening circuit.

Reference Drawings:
1,7B601-78-1 through -6 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

CONTROL ROD DRIVE HYDRAULIC SYSTEM (System Code 85)

VALVE TAG NO.	TVA MARK NO. OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-85-23	CE-3-20	SMB-000	331261A	845244A	NO	NA	NO
FCV-85-27	CE-3-22	SMB-000	331261A	845211A	NO	NA	NO
FCV-85-50	CE-3-109	SMB-00	337950A	100851	NO	NA	YES
FCV-85-56	47W400-3, 3-A	SMB-000	354040A	133353	NO	NA	YES

*Remove torque switch from opening circuit.

Reference Drawings:
47E501-85-1 through -15 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

SUBMITTED | RECOMMENDED | APPROVED

RADIATION MONITORING SYSTEM (System Code 90)

VALVE TAG NO.	TVA MARK NO OR GE MPL NO.	OPERATOR TYPE & SIZE	LIMI-TORQUE ORDER NO.	OPERATOR SERIAL NO.	MODIFY OPENING CIRCUIT *	MODIFY TORQUE SWITCH IN CLOSING CIRCUIT	TORQUE SWITCH TORSION SPRING CHANGE
FCV-90-146A	Part of Unit 25-39	AUTOMATIC	VALVE		NA	NA	
FCV-90-153		HONEYWELL	VALVE		NA	NA	
FCV-90-254A	GE-16-20-72A	RAMCON			NA	NA	
FCV-90-254B	GE-16-20-72E	RAMCON			NA	NA	
FCV-90-255A	GE-16-20-72B	RAMCON			NA	NA	
FCV-90-257A	GE-16-20-72D	RAMCON			NA	NA	
FCV-90-257B	GE-16-20-72C	RAMCON			NA	NA	

*Remove torque switch from opening circuit.

Reference Drawings:
47B601-90-1 through -32 ---- Instrument Tabulation

POWERHOUSE
UNIT 3

MECHANICAL
VALVE MOTOR OPERATOR
TABULATION

BROWNS FERRY NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

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RO

NOV 16 1973

Letter from Tennessee Valley Authority, J. E. Gilleland,
dated November 14, 1973 - 50-259, -260, and -296 - ROB 72-3

cc w/encl:
H. D. Thornburg
RO:HQ (4)
Directorate of Licensing (4)
DR Central Files

cc w/o encl:
PDR
Local PDR
NSIC
OIS, OR