GEORGIA POWER COMPANY
INSERVICE TEST PROGRAM
(ISI-P-016)
FOR
VOGTLE ELECTRIC GENERATING PLANT
UNIT 2
PREPARED BY
SOUTHERN NUCLEAR OPERATING COMPANY
INSPECTION AND TESTING SERVICES GROUP

REV.	DATE	DESCRIPTION	SNC				GPC	
			PREP'D BY (ITS)	REV'D BY (ITS)	APPV. BY (ITS)	APPV. VOGTLE PROJECT NMCS	APPV. MGR. TECH. SUPP.	APPR. GEN. MGR.
0	3/02/88	ISSUED FOR PST/1ST	X	X	X	X	X	X
1	8/25/88	INCORPORATE RR--27 & CS-39	X	X	X	X	X	X
2	2/15/90	REFER TO REVISION 2 SUMMARY OF CHANGES	X	X	X	X	X	X
3	2/28/91	REFER TO REVISION 3 SUMMARY OF CHANGES	X	X	X	X	X	X
4	3/22/93	REFER TO REVISION 4 SUMMARY OF CHANGES	DWS	DLD	MB	via PST	JHR	MHD

VOGTLE ELECTRIC GENERATING PLANT - UNIT 2
INSERVICE TEST (IST) PROGRAM

ISI-P-016

Revision 4 Summary of Changes

List of Effective Pages	Revised to indicate the current revision number of each page in the program document. See below for pages affected.
Page 12-43	Revised to add valve 1-1208-U6-124.
Page 12-46	Revised to change valve type for HV 8220.
Page 12-60	Safety position was changed to O/C and disassembly was added to confirm reverse flow closure and reference to Relief Request RR-23 was added for valve 1301-U4-006. Safety position was changed from O/C to O for valve 1301-U4-404.
Page 13-14	Relief Request RR-14 was revised to change frequency for disassembly and manual exercising from every outage to every other outage for valves 1206-U6-015 and 016.
Page 13-23	Relief Request RR-23 was revised to include valve 1301-U4-006.
Page 13-28	Added Relief Request RR-28 for testing valve 1-1208-U6-124.
Page 14-31	Cold Shutdown Justification CS-31 was revised to delete valve 1301-U4-006. Testing for this valve has been added to Relief Request RR-23.

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Valve Number	Class ISI	Class Proj.	P&ID (Coord.)	Cat	Valve Size (in.)	Valve Type	Act. Type	Position Norm	Position Fail Safety	Act. or Pass	Tests and Freq. PI	EI	SI	FSV	LI	Relief Req. or C.S. Just.	Description and Notes
U4 284	3	313	2X4DB118 (D-5)	C	2.00	CK	S	C	N/A O	A		Q					Boric Acid Transfer Pump Discharge
U4 299	3	313	2X4DB118 (B-5)	C	2.00	CK	S	C	N/A O	A		Q					Boric Acid Transfer Pump Discharge
U4 499	2	212	2X4DB116-1 (D-3)	C	1.00	CK	S	C	N/A O	A		CS				CS-29 RR-2	Boric Acid to Charging Pumps
U6 032	2	212	2X4DB114 (F-3)	AC	3.00	CK	S	O	N/A O/C	A		R Q			R	RR-2,16	CVCS to Regenerative HX - Penetration No. 50 (Note 1)
U6 124	2	212	2X4DB116-1 (E-4)	C	4.00	CK	S	O	N/A C	A		R				RR-2,28	VCT Outlet Check
U6 142	2	212	2X4DB116-2 (G-6)	C	4.00	CK	S	C	N/A O/C	A		PQR				RR-2,12	CVCS Pump Out Check
U6 149	2	212	2X4DB116-2 (C-6)	C	4.00	CK	S	C	N/A O/C	A		PQR				RR-2,12	CVCS Pump Out Check

Valve Number	Class ISI	Class Proj.	P&ID (Coord.)	Valve Size Cat	Valve Size (in.)	Valve Size Type	Act. Type	Position Norm	Position Fail	Position Safety	Act. or Pass	Tests and Freq. PI	EI	SI	FSV	LI	Relief Req. or C.S. Just.	Description and Notes
HV 3514	2	212	2X4DB140 (F-7)	A	0.50	GL	AO	C	C	C	A	Y	Q	Q	Q	R		Pressurizer Steam Space - Penetration No. 67A (Note 1)
HV 3548	2	212	2X4DB140 (D-8)	A	0.50	GL	MO	O	AI	C	A	Y	Q	Q		R		Reactor Hot Leg Sample Line - Penetration No. 24 (Note 1)
HV 8220	2	212	2X4DB140 (D-7)	A	0.50	GA	ES	C	C	C	A	Y	Q	Q	Q	R		Post-Accident Sampling - Penetration No. 24 (Note 1)

Valve Number	Class ISI	Class Proj.	P&ID (Coord.)	Cat	Valve Size (in.)	Valve Type	Act. Type	Position Norm	Position Fail	Position Safety	Act. or Pass	Tests and Freq. PI	Tests and Freq. ET	Tests and Freq. ST	Tests and Freq. FSV	Tests and Freq. LT	Relief Req. or C.S. Just.	Description and Notes
PV 3020	2	212	2X4DB159-2 (D-2)	B	10.00	GL	EH	C	C	O/C	A	Y	Q	Q	Q			Main Steam Power-Operated Relief Valve
PV 3030	2	212	2X4DB159-2 (C-2)	B	10.00	GL	EH	C	C	O/C	A	Y	Q	Q	Q			Main Steam Power-Operated Relief Valve
U4 006	3	313	2X4DB159-2 (G-4)	C	4.00	CK	S	C	N/A	O/C	A		PQCS RM				RR-Z3, 2	Auxiliary Feedwater (AFW) Pump Check
U4 008	3	313	2X4DB159-2 (E-4)	C	4.00	CK	S	C	N/A	O/C	A		PQCS RM				RR-Z3, 2	AFW Pump Check
U4 404	3	313	2X4DB159-2 (E-4)	C	4.00	CK	S	C	N/A	O	A		PQCS				CS-31, RR-2	AFW Pump Check

RELIEF REQUEST

RR-14

SYSTEM: Containment Spray-System No. 1206

VALVE(S): 1206-U6-015, 1206-U6-016

CATEGORY: AC

CLASS: 2

FUNCTION: Valve opens to allow flow for containment spray. Valve closes to perform containment isolation function.

QUARTERLY TEST REQUIREMENT: Verify forward and reverse flow operability per IWV-3522.

BASIS FOR RELIEF: Forward flow operability can be verified only by initiating flow through the valves into the containment structure. The initiation of containment spray into the containment would result in extensive damage to equipment inside containment. The only method available to verify reverse flow closure is valve leak testing during Appendix J, type C, testing at refueling.

ALTERNATE TESTING: One of these valves will be disassembled and manually stroked every other refueling on a staggered test basis. If disassembly reveals that the valve is inoperable, the remaining valves will be disassembled. In addition, reverse flow closure will be verified during Appendix J, type C, testing at refueling.

These valves can not be partial exercised with flow after reassembly due to open discharge path inside containment. Appendix J leak rate testing after reassembly should confirm proper reassembly and disk alignment and will provide an adequate confidence level that check valve is functional.

GENERIC LETTER 89-04 REVIEW: This relief request complies with the alternative to full flow testing of check valves as described in Position 2 of NRC Generic Letter 89-04. The provisions for extending the disassembly frequency have been reviewed and extension to every other outage is justified.

RELIEF REQUEST

RR-28

SYSTEM: Chemical and Volume Control - System 1208

VALVE: 2-1208-U6-124

CATEGORY: C

CLASS: 2

FUNCTION: Isolate potential leakage path outside containment

QUARTERLY TEST REQUIREMENT: Verify reverse flow closure quarterly per IWV-3522(a).

BASIS FOR RELIEF: Testing this check valve requires that letdown and Reactor Coolant Pump (RCP) seal water return to the Volume Control Tank (VCT) be isolated, thus, removing the Chemical and Volume Control System (CVCS) from service. The CVCS is required to be in service during normal operation. Therefore, quarterly testing is not possible.

Similarly, performing the test at cold shutdown would require isolating seal water to the RCPs. RCP seal water is typically only isolated during mid-loop operations when the Reactor Coolant System (RCS) level is below the RCP seals thus preventing crud intrusion into the seal packages. There have been numerous undersirable events throughout the industry which have resulted from mid-loop operations, e.g., vortexing/cavitation of the Residual Heat Removal (RHR) pumps due to improper RCS level indication. Mid-loop operation reduces RCS inventory which thereby reduces the plant's margin of safety. Therefore, the safety risks associated with testing this check valve during cold shutdowns are unwarranted.

ALTERNATE TESTING: Reverse flow closure will be verified during each refueling outage by measuring a change in VCT level over time. This test will be performed in conjunction with the Emergency Core Cooling Systems (ECCS) check valve flow tests when the RHR system is providing flow to the suction of the centrifugal charging pumps. This check valve must close to prevent flow diversion to the VCT.

GENERIC LETTER 89-04 Review: The proposed alternate testing method complies with Postion 3 of NRC Generic Letter 89-04.

RELIEF REQUEST

RR-23

SYSTEM: Main Steam - System No. 1301

VALVE(S): 1301-U4-008, 1301-U4-006

CATEGORY: C

CLASS: 3

FUNCTION: These valves open to allow steam to the AFW pump turbine and close to prevent reverse flow.

QUARTERLY TEST REQUIREMENT: Verify forward flow operability and reverse flow closure per IWV-3522.

BASIS FOR RELIEF: Full-stroke exercising these valves during full power operation would require establishing full AFW pump flow into the steam generators. The introduction of cold water into the hot steam generators during full power operation results in a significant thermal shock to the feedwater nozzle. Subjecting the feedwater nozzle to this thermal transient on a quarterly basis decreases the fatigue life of the nozzle and could possibly result in nozzle cracking.

There are no system provisions for utilizing flow or pressure as an indication of reverse flow closure.

ALTERNATE TESTING: These valves are partial-stroke exercised quarterly during the turbine-driven AFW pump test.

These valves will be full-stroke exercised on a cold shutdown frequency by verifying that the AFW pump is delivering the required flow through valves 1302-U4-014, 1302-U4-017, 1302-U4-020, 1302-U4-023 and 1302-U4-026 as discussed in CS-19.

Reverse flow closure will be demonstrated by disassembly and manual full-stroke exercising on a staggered test basis at refueling. Valves will be exercised with flow after reassembly.

GENERIC LETTER 89-04 REVIEW: This relief request complies with the alternative to full flow testing of check valves as described in Position 2 of NRC Generic Letter 89-04.

COLD SHUTDOWN JUSTIFICATION

CS-31

SYSTEM: Main Steam - System No. 1301

VALVE(S): 1301-U4-404

CATEGORY: C

CLASS: 3

FUNCTION: This valve opens to allow steam to the AFW pump turbine.

QUARTERLY TEST REQUIREMENT: Verify forward flow operability per IWV-3522.

COLD SHUTDOWN TEST JUSTIFICATION: This valve is partial-stroke exercised quarterly during the turbine-driven AFW pump test. Full-stroke exercising during power operation cannot be performed because the turbine-driven AFW pump is not delivering full flow to the steam generators.

QUARTERLY PARTIAL STROKE TESTING: Partial-stroke exercising is performed during the turbine-driven AFW pump test.

COLD SHUTDOWN TESTING: Testing of valves 1302-U4-014, 1302-U4-017, 1302-U4-020, 1302-U4-023, and 1302-U4-026 as discussed in CS-19 verifies that valve 1301-U4-404 opens to perform its safety related function by ensuring that the AFW pump is delivering required flow.

GENERIC LETTER 89-04 REVIEW: This cold shutdown justification complies with the full-stroke testing requirements for check valves as described in Position 1 of NRC Generic Letter 89-04.