

BEAVER VALLEY POWER STATION
UNIT 2 SIMULATOR
FOUR YEAR CERTIFICATION REPORT
1996 - 1999

This four year certification report satisfies the reporting requirements identified in 10 CFR 55.45(b)(5)(ii) and (b)(5)(vi).

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References and Requirements

References:

1. Title 10, Code of Federal Regulations, Part 55, "Operators' Licenses," Subpart E, Section 45.
2. U.S. NRC Regulatory Guide 1.149, 1987, "Nuclear Power Plant Simulation Facilities for use in Operator License Examinations."
3. ANSI 3.5, 1985, "Nuclear Power Plant Simulators for use in Operator Training."

Reporting Requirements:

The requirements of this report as outlined in 10 CFR 55 are:

1. Identification of any uncorrected performance test failures and a schedule for corrections of such performance failures if any. Subpart E, Section 55.45(b)(5)(ii). (Refer to page 4.)
2. A description of performance testing completed for the simulation facility. Subpart E, Section 55.45(b)(5)(vi). (Refer to page 2.)
3. A description of the performance tests, if different, to be conducted on the simulation facility during the subsequent four year period. Subpart E, Section 55.45(b)(5)(vi). (none)
4. A schedule for the conduct of approximately 25 percent of the performance tests per year for the subsequent four years. Subpart E, Section 55.45(b)(5)(vi). (Refer to pages 5 through 12.)

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Summary of Results 1996 - 1999

All commitments from the previous four year certification report have been completed. The testing for the second four years following initial certification, as submitted in the original Simulator Certification Report, is complete. A total of 263 tests were performed and evaluated. The following tables summarize the test results:

Tests Completed	1996	1997	1998	1999
Simulator Real Time	1	1	1	1
Steady State, Drift, Normal Ops.	7	8	7	9
Transient Test (Appendix B)	10	10	10	10
Malfunction Tests	<u>47</u>	<u>47</u>	<u>48</u>	<u>46</u>
Total	65	66	66	66
Action List	1996	1997	1998	1999
Trouble Reports Written (TR)	6	8	7	14
Trouble Reports Cleared (TR)	6	8	7	3
Uncorrected Test Deficiencies:	0	0	0	11

The corrected test deficiencies for 1996 - 1999 are listed on page 3.

The uncorrected test deficiencies for 1996 - 1999 are listed on page 4

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Simulator Qualification Test (SQT)
Corrected Test Deficiencies

SQT TEST NUMBER	TEST DESCRIPTION	TROUBLE REPORT	DATE COMPLETE
1996			
14.1.5.4.13.01	FPW VALVES OUT OF POSITION TEST	5658	05/27/96
14.1.5.4.17.03	PLANT COMPUTER SYSTEM FAILURE TEST	5659	12/06/97
14.1.5.4.20.02	ROD CONTROL TREF FAILURE TEST	5661	09/10/97
14.1.5.4.29.02	TRANSFORMER FAILURE TEST	5668	12/07/96
14.1.5.4.33.02	FILTER ADVANCE FAILURE TEST	5662	11/27/98
14.1.5.8.3.06	MAIN STEAM ISOLATION VALVES	5680	10/30/96
1997			
14.1.5.2.1.07	100 PERCENT, PLANT TRIP/RECOVERY TEST	5729	11/30/99
		5732	12/06/97
14.1.5.4.06.03	CONDENSER TUBE LEAK TEST	5718	09/22/97
14.1.5.4.16.04	LOSS OF DC BUS OR SWITCHBOARD TEST	5721	12/13/97
14.1.5.4.18.05	STEAM GENERATOR SAFETY VALVE FAILURE TEST	5723	12/06/97
14.1.5.4.23.04	STEAM GENERATOR TUBE LEAK TEST	5742	12/30/98
14.1.5.4.24.02	RHS PUMP VORTEXING TEST	5726	11/28/98
N/A	ALLOW MULTIPLE FIRST OUT ALARMS	5708	09/22/97
1998			
14.1.5.2.1.01	REACTOR PLANT HEATUP FROM COLD SHUTDOWN TO HOT STANDBY	5791	04/12/99
14.1.5.4.07.01	RECIRCULATION SPRAY SYSTEM LEAK TEST	5772	09/02/98
14.1.5.4.17.05	REACTOR DRAINS AND VENTS SYSTEM LEAK TEST	5777	08/17/98
14.1.5.4.23.08	PRESSURIZER STEAM SPACE LEAK TEST	5778	08/20/98
14.1.5.4.30.02	LOSS OF UNIT 1 SEAL WATER TO SWS PUMP TEST	5766	09/02/98
14.1.5.4.9.2.1	CHARGING SYSTEM LEAK TEST	5773	08/15/98
14.1.5.4.9.2.5	BORON RECOVERY SYSTEM LEAK TEST	5774	08/16/98
1999			
14.1.5.2.6.04	OST 2.2.2 NUCLEAR INTERMEDIATE RANGE CHANNEL FUNCTIONAL TEST	5830	08/31/99
14.1.5.2.6.05	OST 2.2.3 NUCLEAR SOURCE RANGE CHANNEL FUNCTIONAL TEST	5831	08/31/99
14.1.5.4.16.02	LOSS OF 480-VOLT BUS TEST	5825	09/01/99

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Simulator Qualification Test (SQT)
Uncorrected Test Deficiencies

SQT TEST NUMBER	TEST DEFICIENCIES	TROUBLE REPORT	SCHEDULED DATE
1999			
14.1.5.2.1.03	NEED TO RESCALE NIS IR CHANNELS FOR CYCLE 8 FLUX SETPOINTS	5841	12/31/00
	2CNM-FCV101 OSCILLATES DURING PLANT STARTUP	5842	12/31/00
	2SDS-TR100 POINT 16 READING DOES NOT MATCH SOFTWARE DRIVER	5843	12/31/00
	MSR VALVE RAMP OPEN TIME SHOULD BE 120 MIN.	5844	12/31/00
14.1.5.4.12.10	TURBINE DOES NOT TRIP ON LOW EH (TRIP) HEADER PRESSURE	5823	12/31/00
14.1.5.4.16.02	PCS V2854D ALARMED ON MALF LOV1E LOSS OF 2E 480V BUS	5824	12/31/00
	ALARM A8-3E, Y2951D OCCURS MALF LOV1J LOSS OF 480V BUS 2N	5832	12/31/00
14.1.5.4.22.09	LOWER BRG & SEAL LKOFF TEMP RISE DUE TO THERMAL BARRIER LEAK	5826	12/31/01
14.1.5.4.23.03	SFGDS RADIATION 2RMR*RQ205B DID NOT RESPOND TO LOCA IN SFGDS	5837	12/31/01
14.1.5.4.26.01	SFP FLEX LEAK NODE 7 BAD LOCATION ID AND FLOW INDICATION	5828	12/31/01
14.1.5.5.2.02	CLF PUMP SEVERED LEADS DOES NOT WORK FOR 2FWS-P21A,B MFPs	5829	12/31/01

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Tests and Schedule for 1996 - 1999

SQT TEST NUMBER	TEST DESCRIPTION	YEAR TO BE TESTED			
		2000	2001	2002	2003
Simulator Real Time Test					
SQT-14.1.2.2	DUTY CYCLE TEST	X	X	X	X
Steady State, Drift and Normal Operations Test					
SQT-14.1.5.2.2.01	STEADY STATE DRIFT TEST - FULL POWER	X	X	X	X
SQT-14.1.5.2.2.02	STEADY STATE DRIFT TEST - INTERIM POWER	X	X	X	X
SQT-14.1.5.2.2.03	STEADY STATE DRIFT TEST - LOW POWER	X	X	X	X
SQT-14.1.5.2.1.01	REACTOR PLANT HEATUP FROM COLD SHUTDOWN TO HOT STANDBY			X	
SQT-14.1.5.2.1.02	REACTOR STARTUP				X
SQT-14.1.5.2.1.03	PLANT STARTUP FROM ZERO POWER TO FULL POWER				X
SQT-14.1.5.2.1.04	LOAD FOLLOWING FROM FULL POWER TO 40 PERCENT	X			
SQT-14.1.5.2.1.05	PLANT SHUTDOWN FROM 40 PERCENT POWER TO HOT STANDBY	X			
SQT-14.1.5.2.1.06	PLANT COOLDOWN FROM HOT STANDBY TO COLD SHUTDOWN		X		
SQT-14.1.5.2.1.07	100 PERCENT, PLANT TRIP/RECOVERY TEST		X		
SQT-14.1.5.2.6.01	OST 2.1.1 CONTROL ROD ASSEMBLY PARTIAL MOVEMENT TEST		X		
SQT-14.1.5.2.6.03	OST 2.2.1 NUCLEAR POWER RANGE CHANNEL FUNCTIONAL TEST			X	
SQT-14.1.5.2.6.04	OST 2.2.2 NUCLEAR INTERMEDIATE RANGE CHANNEL FUNCTIONAL TEST				X
SQT-14.1.5.2.6.05	OST 2.2.3 NUCLEAR SOURCE RANGE CHANNEL FUNCTIONAL TEST				X
SQT-14.1.5.2.6.10	OST 2.6.2 REACTOR COOLANT SYSTEM WATER INVENTORY BALANCE			X	
SQT-14.1.5.2.6.11	OST 2.6.4 MEASUREMENT OF SEAL INJECTION FLOW	X			
SQT-14.1.5.2.6.12	OST 2.6.6 PORV ISOLATION VALVE TEST AND POSITION CHECK		X		
SQT-14.1.5.2.6.13	OST 2.6.7 ACCIDENT MONITORING INSTRUMENTATION CHANNEL CHECKS			X	
SQT-14.1.5.2.6.29	OST 2.36.1 EMERGENCY DIESEL GENERATOR 2EGS*EG2-1 MONTHLY TEST				X
SQT-14.1.5.2.6.35	OST 2.43.9 GASEOUS EFFLUENT MONITORS CHANNEL FUNCTIONAL TEST		X		
SQT-14.1.5.2.6.37	OST 2.44A.2 CONTROL ROOM VENTILATION SYSTEM TEST - TRAIN A	X			
SQT-14.1.5.2.6.45	OST 2.24.2 MOTOR-DRIVEN AUILIARY FEED PUMP 2FWE*P23A TEST				X

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		2000	2001	2002	2003
Transient Tests					
SQT-14.1.5.8.3.04	REACTOR TRIP TEST	X	X	X	X
SQT-14.1.5.8.3.05	TRIP OF ALL FEEDWATER PUMPS TEST	X	X	X	X
SQT-14.1.5.8.3.06	MAIN STEAM ISOLATION VALVES CLOSURE TEST	X	X	X	X
SQT-14.1.5.8.3.07	COMPLETE LOSS OF REACTOR COOLANT FLOW TEST	X	X	X	X
SQT-14.1.5.8.3.08	PARTIAL LOSS OF REACTOR COOLANT FLOW TEST	X	X	X	X
SQT-14.1.5.8.3.09	TURBINE TRIP WITHOUT DIRECT REACTOR TRIP TEST	X	X	X	X
SQT-14.1.5.8.3.10	MAIMUM RATE POWER RAMP TEST	X	X	X	X
SQT-14.1.5.8.3.11	DESIGN BASIS ACCIDENT LOSS OF COOLANT ACCIDENT TRANSIENT TEST	X	X	X	X
SQT-14.1.5.8.3.12	DESIGN BASIS ACCIDENT STEAM LINE RUPTURE TEST	X	X	X	X
SQT-14.1.5.8.3.13	STUCK OPEN PRESSURIZER SAFETY WITHOUT HIGH HEAD SAFETY INJECTION TEST	X	X	X	X
Malfunction Tests					
SQT-14.1.5.4.01.01	AFW PUMP RECIRCULATION VALVE FAILURE TEST	X			
SQT-14.1.5.4.01.02	AUILIARY FEEDWATER SYSTEM LEAK TEST		X		
SQT-14.1.5.4.01.03	TERRY TURBINE GOVERNOR FAILURE TEST			X	
SQT-14.1.5.4.01.04	STEAM LEAK ON TERRY TURBINE SUPPLY LINE TEST				X
SQT-14.1.5.4.02.01	AUILIARY STEAM HEADER LEAK TEST	X			
SQT-14.1.5.4.03.01	AIR HEADER LEAK TEST		X		
SQT-14.1.5.4.03.03	CLOGGED INSTRUMENT AIR FILTER TEST			X	
SQT-14.1.5.4.04.01	CCS SYSTEM LEAK TEST				X
SQT-14.1.5.4.05.01	CCP SYSTEM LEAK TEST		X		
SQT-14.1.5.4.05.02	CCP HEAT ECHANGER TUBE LEAK TEST			X	
SQT-14.1.5.4.05.03	NEUTRON SHIELD TANK LEAK TEST				X
SQT-14.1.5.4.05.04	CCP VALVE SEAT LEAKAGE TEST	X			
SQT-14.1.5.4.06.01	CONDENSATE PUMP SUCTION STRAINER CLOGGED TEST	X			
SQT-14.1.5.4.06.02	CONDENSATE/FEEDWATER SYSTEM LEAK TEST			X	
SQT-14.1.5.4.06.03	CONDENSER TUBE LEAK TEST		X		
SQT-14.1.5.4.06.04	AIR EJECTOR FAILURE TEST				X
SQT-14.1.5.4.06.05	ERRATIC MAIN AND BYPASS FWRV OPERATION TEST	X			
SQT-14.1.5.4.06.06	CFW VALVE SEAT LEAKAGE TEST		X		

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		2000	2001	2002	2003
Malfunction Tests					
SQT-14.1.5.4.07.01	RECIRCULATION SPRAY SYSTEM LEAK TEST			X	
SQT-14.1.5.4.07.02	RECIRCULATION SPRAY HEAT EXCHANGER TUBE LEAK TEST				X
SQT-14.1.5.4.07.03	CSS VALVE SEAT LEAKAGE TEST	X			
SQT-14.1.5.4.08.01	FAILURE OF RODS TO MOVE TEST		X		
SQT-14.1.5.4.08.02	UNCOUPLED ROD TEST			X	
SQT-14.1.5.4.08.03	DROPPED ROD(S) TEST				X
SQT-14.1.5.4.08.04	UNCONTROLLED ROD MOTION TEST	X			
SQT-14.1.5.4.08.05	DRPI FAILURE TEST		X		
SQT-14.1.5.4.08.06	ROD EJECTION TEST			X	
SQT-14.1.5.4.08.07	ROD POSITION STEP COUNTER FAILURE TEST				X
SQT-14.1.5.4.08.08	STUCK ROD(S) TEST	X			
SQT-14.1.5.4.08.09	POWER CABINET FAILURE TEST		X		
SQT-14.1.5.4.08.10	LOGIC CABINET FAILURE TEST			X	
SQT-14.1.5.4.09.01	LETDOWN RELIEF VALVE FAILURE TEST				X
SQT-14.1.5.4.09.03	PLUGGED CVCS FILTERS TEST			X	
SQT-14.1.5.4.09.04	VOLUME CONTROL TANK LEAK TEST				X
SQT-14.1.5.4.09.05	LOSS OF PRIMARY GRADE WATER TEST	X			
SQT-14.1.5.4.09.06	CVCS HEAT EXCHANGER TUBE LEAKS TEST		X		
SQT-14.1.5.4.09.07	CHARGING PUMP LUBE OIL COOLER CLOGGING TEST			X	
SQT-14.1.5.4.09.08	CHS VALVE SEAT LEAKAGE TEST				X
SQT-14.1.5.4.10.01	CIRCULATING WATER SYSTEM LEAK TEST	X			
SQT-14.1.5.4.11.01	DIESEL GENERATOR TRIP TEST		X		
SQT-14.1.5.4.11.02	DIESEL GENERATOR SEQUENCER FAILURE TEST	X			
SQT-14.1.5.4.11.03	DIESEL GENERATOR ERRATIC VOLTAGE REGULATION TEST			X	
SQT-14.1.5.4.11.04	DIESEL GENERATOR ERRATIC SPEED CONTROL TEST				X
SQT-14.1.5.4.12.01	GOVERNOR VALVE FAILURE TEST		X		
SQT-14.1.5.4.12.02	ERRATIC GOVERNOR VALVE CONTROL TEST				X
SQT-14.1.5.4.12.03	THROTTLE VALVE FAILURE TEST	X			
SQT-14.1.5.4.12.04	ERRATIC THROTTLE VALVE CONTROL TEST		X		
SQT-14.1.5.4.12.05	REHEAT/INTERCEPT STOP VALVE FAILURE TEST			X	
SQT-14.1.5.4.12.06	VALVE POSITION LIMITER FAILURE TEST				X
SQT-14.1.5.4.12.07	INADVERTENT TURBINE TRIP TEST	X			
SQT-14.1.5.4.12.08	TURBINE TRIP FAILURE TEST		X		
SQT-14.1.5.4.12.09	TURBINE RUNBACK FAILURE TEST			X	
SQT-14.1.5.4.12.10	EHC PUMP UNLOADER VALVE FAILURE TEST				X
SQT-14.1.5.4.13.01	FPW VALVES OUT OF POSITION TEST	X			

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		2000	2001	2002	2003
Malfunction Tests					
SQT-14.1.5.4.14.01	FIRST POINT FEEDWATER HEATER TUBE LEAK TEST		X		
SQT-14.1.5.4.14.02	SECOND POINT FEEDWATER HEATER TUBE LEAK TEST			X	
SQT-14.1.5.4.15.01	MAIN GENERATOR TRIP TEST				X
SQT-14.1.5.4.15.02	AUTOMATIC VOLTAGE REGULATOR FAILURE TEST	X			
SQT-14.1.5.4.15.03	GENERATOR HYDROGEN COOLER TUBE LEAK TEST		X		
SQT-14.1.5.4.16.01	LOSS OF 4160-VOLT BUS TEST			X	
SQT-14.1.5.4.16.02	LOSS OF 480-VOLT BUS TEST				X
SQT-14.1.5.4.16.03	LOSS OF INVERTER/VITAL BUS/ESSENTIAL BUS TEST	X			
SQT-14.1.5.4.16.04	LOSS OF DC BUS OR SWITCHBOARD TEST		X		
SQT-14.1.5.4.17.01	CONTAINMENT PENETRATION ELECTRICAL PROTECTION BREAKER TRIP			X	
SQT-14.1.5.4.17.02	LOSS OF ANNUNCIATOR CONTROL POWER TEST				X
SQT-14.1.5.4.17.03	PLANT COMPUTER SYSTEM FAILURE TEST	X			
SQT-14.1.5.4.17.04	CONTAINMENT AIR INLEAKAGE TEST		X		
SQT-14.1.5.4.17.05	REACTOR DRAINS AND VENTS SYSTEM LEAK TEST			X	
SQT-14.1.5.4.18.01	STEAM LEAK UPSTREAM OF MSIV INSIDE CONTAINMENT TEST		X		
SQT-14.1.5.4.18.02	STEAM LEAK UPSTREAM OF MSIV OUTSIDE CONTAINMENT TEST			X	
SQT-14.1.5.4.18.03	MAIN STEAM HEADER LEAK TEST				X
SQT-14.1.5.4.18.04	STEAM LEAK ON RHR VALVE LINE TEST	X			
SQT-14.1.5.4.18.05	STEAM GENERATOR SAFETY VALVE FAILURE TEST		X		
SQT-14.1.5.4.18.06	MSS VALVE SEAT LEAKAGE TEST			X	
SQT-14.1.5.4.19.01	SOURCE RANGE CHANNEL FAILURE TEST				X
SQT-14.1.5.4.19.02	INTERMEDIATE RANGE CHANNEL FAILURE TEST	X			
SQT-14.1.5.4.19.03	POWER RANGE CHANNEL FAILURE TEST		X		
SQT-14.1.5.4.19.04	INTERMEDIATE RANGE COMPENSATING VOLTAGE FAILURE TEST			X	
SQT-14.1.5.4.19.05	SOURCE RANGE HIGH VOLTAGE CUTOFF FAILURE TEST				X
SQT-14.1.5.4.19.06	SOURCE RANGE BLOWN FUSE TEST	X			
SQT-14.1.5.4.19.07	INTERMEDIATE RANGE BLOWN FUSE TEST		X		
SQT-14.1.5.4.19.08	POWER RANGE BLOWN FUSE TEST			X	

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		2000	2001	2002	2003
Malfunction Tests					
SQT-14.1.5.4.20.01	AUTOMATIC ROD SPEED CONTROLLER FAILURE TEST				X
SQT-14.1.5.4.20.02	ROD CONTROL TREF FAILURE TEST	X			
SQT-14.1.5.4.20.03	ROD STOP FAILURE TEST		X		
SQT-14.1.5.4.21.01	REACTOR TRIP FAILURE TEST			X	
SQT-14.1.5.4.21.02	INADVERTENT REACTOR TRIP TEST				X
SQT-14.1.5.4.21.03	INADVERTENT SAFETY INJECTION SIGNAL TEST	X			
SQT-14.1.5.4.21.04	INADVERTENT CONTAINMENT ISOLATION PHASE A SIGNAL TEST		X		
SQT-14.1.5.4.21.05	SAFETY INJECTION ACTUATION FAILURE TEST			X	
SQT-14.1.5.4.21.06	SSPS INPUT RELAY FAILURE TEST				X
SQT-14.1.5.4.21.07	ESF LOAD AUTO-START FAILURE TEST	X			
SQT-14.1.5.4.22.01	REACTOR COOLANT PUMP NO. 1 SEAL FAILURE TEST		X		
SQT-14.1.5.4.22.02	REACTOR COOLANT PUMP NO. 2 SEAL FAILURE TEST			X	
SQT-14.1.5.4.22.03	REACTOR COOLANT PUMP NO. 3 SEAL FAILURE TEST				X
SQT-14.1.5.4.22.04	RCP TRIP TEST		X		
SQT-14.1.5.4.22.05	RCP LOCKED ROTOR TEST	X			
SQT-14.1.5.4.22.06	RCP HIGH VIBRATION TEST		X		
SQT-14.1.5.4.22.07	RCP SHEARED SHAFT TEST	X			
SQT-14.1.5.4.22.08	RCP LUBE OIL LEAK TEST			X	
SQT-14.1.5.4.22.09	RCP THERMAL BARRIER HEAT EXCHANGER TUBE LEAK TEST				X
SQT-14.1.5.4.23.01	SURGE LINE LEAK TEST	X			
SQT-14.1.5.4.23.02	SMALL BREAK LOCA TEST			X	
SQT-14.1.5.4.23.03	LARGE BREAK LOCA TEST				X
SQT-14.1.5.4.23.04	STEAM GENERATOR TUBE LEAK TEST		X		
SQT-14.1.5.4.23.05	REACTOR VESSEL HEAD O-RING LEAK TEST				X
SQT-14.1.5.4.23.06	INTERMEDIATE LEG BREAK TEST	X			
SQT-14.1.5.4.23.07	PRESSURIZER SAFETY VALVE FAILURE TEST		X		
SQT-14.1.5.4.23.08	PRESSURIZER STEAM SPACE LEAK TEST			X	
SQT-14.1.5.4.23.09	RCS LOOP ISOLATION VALVE STEM FAILURE TEST			X	
SQT-14.1.5.4.23.10	RCS VALVE SEAT LEAKAGE TEST				X
SQT-14.1.5.4.23.11	VARIABLE PRESSURIZER NONCONDENSABLE PARTIAL PRESSURE	X			
SQT-14.1.5.4.24.01	RHS SUCTION RELIEF LEAKAGE TEST	X			
SQT-14.1.5.4.24.02	RHS PUMP VORTEING TEST		X		
SQT-14.1.5.4.24.03	RHS HEAT EXCHANGER TUBE LEAK TEST			X	

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		2000	2001	2002	2003
Malfunction Tests					
SQT-14.1.5.4.24.04	RHS SYSTEM LEAK TEST				X
SQT-14.1.5.4.24.05	RHS VALVE SEAT LEAKAGE TEST	X			
SQT-14.1.5.4.25.01	REACTOR COOLANT SYSTEM ACTIVITY HIGH TEST			X	
SQT-14.1.5.4.25.02	REACTIVITY ANOMALY TEST		X		
SQT-14.1.5.4.26.01	SPENT FUEL POOL PURIFICATION SYSTEM LEAK TEST				X
SQT-14.1.5.4.26.02	SPENT FUEL POOL COOLING SYSTEM LEAK TEST	X			
SQT-14.1.5.4.27.01	STEAM GENERATOR BLOWDOWN SYSTEM LEAK TEST		X		
SQT-14.1.5.4.28.01	REFUELING WATER STORAGE TANK LEAK TEST			X	
SQT-14.1.5.4.28.02	ACCUMULATOR GAS SPACE LEAK TEST				X
SQT-14.1.5.4.28.03	ACCUMULATOR WATER SPACE LEAK TEST	X			
SQT-14.1.5.4.28.04	SAFETY INJECTION LINE LEAK TEST		X		
SQT-14.1.5.4.28.05	SIS VALVE SEAT LEAKAGE TEST			X	
SQT-14.1.5.4.29.01	STATION BLACKOUT TEST				X
SQT-14.1.5.4.29.02	TRANSFORMER FAILURE TEST	X			
SQT-14.1.5.4.30.01	SERVICE WATER LINE LEAK TEST		X		
SQT-14.1.5.4.30.02	LOSS OF UNIT 1 SEAL WATER TO SWS PUMP TEST			X	
SQT-14.1.5.4.30.03	CLOGGED SEAL WATER STRAINER TEST				X
SQT-14.1.5.4.31.01	TURBINE BEARING HIGH VIBRATION TEST	X			
SQT-14.1.5.4.31.02	AIR-SIDE HYDROGEN SEAL OIL HEADER LEAK TEST		X		
SQT-14.1.5.4.31.03	PLUGGED HYDROGEN SEAL OIL FILTER TEST			X	
SQT-14.1.5.4.31.04	SEAL OIL LEAK TO GENERATOR TEST				X
SQT-14.1.5.4.31.05	MAIN LUBE OIL PUMP DISCHARGE HEADER LEAK TEST	X			
SQT-14.1.5.4.32.01	GASEOUS WASTE SURGE TANK EFFLUENT LEAK TEST		X		
SQT-14.1.5.4.32.02	GASEOUS WASTE DECAY TANK EFFLUENT HEADER LEAK TEST			X	
SQT-14.1.5.4.33.01	CHECK SOURCE TEST FAILURE TEST				X
SQT-14.1.5.4.33.02	FILTER ADVANCE FAILURE TEST	X			
SQT-14.1.5.4.33.03	LOSS OF FLOW CONTROL TEST		X		
SQT-14.1.5.4.9.2.1	CHARGING SYSTEM LEAK TEST			X	
SQT-14.1.5.4.9.2.2	LETDOWN SYSTEM LEAK TEST				X
SQT-14.1.5.4.9.2.3	BORIC ACID TANK SYSTEM LEAK TEST	X			
SQT-14.1.5.4.9.2.4	SEAL INJECTION SYSTEM LEAK TEST		X		
SQT-14.1.5.4.9.2.5	BORON RECOVERY SYSTEM LEAK TEST			X	
SQT-14.1.5.5.1.01	ACB-342 FAILS AS-IS				X

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SQT TEST NUMBER	TEST DESCRIPTION	YEAR TO BE TESTED			
		2000	2001	2002	2003
Malfunction Tests					
SQT-14.1.5.5.1.02	ACB-142 FAILS TO AUTO TRANSFER	X			
SQT-14.1.5.5.1.03	OCB-94 TRIPS		X		
SQT-14.1.5.5.2.01	2CCP*P21B SEVERED POWER LEADS			X	
SQT-14.1.5.5.2.02	2FWS-P21A SHEARED SHAFT				X
SQT-14.1.5.5.2.03	2CNM-P21B SEIZED SHAFT	X			
SQT-14.1.5.5.2.04	PRESSURIZER HEATER SPURIOUS TRIP		X		
SQT-14.1.5.5.3.01	2QSS*MOV101B STICKS AT 30 PERCENT WHILE OPENING			X	
SQT-14.1.5.5.3.02	2RHS*MOV750B SPURIOUSLY OPENS TEST				X
SQT-14.1.5.5.3.03	2SIS*MOV867B SPURIOUSLY CLOSES	X			
SQT-14.1.5.5.3.04	2CHS*MOV350 LOSES POWER		X		
SQT-14.1.5.5.3.05	2SIS*MOV8888A HANDWHEEL OPERATIONS			X	
SQT-14.1.5.5.4.01	2BDG*AOV101C2 FAILS TO 20 PERCENT				X
SQT-14.1.5.5.4.02	2SAS*AOV105 SPURIOUSLY OPENS	X			
SQT-14.1.5.5.4.03	2CHS*AOV200A SPURIOUSLY CLOSES TEST		X		
SQT-14.1.5.5.4.04	2CHS*LCV460B LOSES CONTROL POWER			X	
SQT-14.1.5.5.5.01	2CHS*SOV206 FAILS TO 35 PERCENT				X
SQT-14.1.5.5.5.02	2GNS*SOV853F SPURIOUSLY OPENS	X			
SQT-14.1.5.5.5.03	2MSS*SOV105A SPURIOUSLY CLOSES		X		
SQT-14.1.5.5.5.04	2RCS*PCV456 LOSES POWER			X	
SQT-14.1.5.5.6.01	2FWS*HYV157A FAILS TO 90 PERCENT				X
SQT-14.1.5.5.6.02	2FWS*HYV157B SPURIOUSLY OPENS	X			
SQT-14.1.5.5.6.03	2FWS*HYV157C SPURIOUSLY CLOSES		X		
SQT-14.1.5.5.6.04	2FWS*HYV157A LOSS OF PUMP POWER			X	
SQT-14.1.5.5.6.05	2FWS*HYV157B ACTUATOR OIL LEAK				X
SQT-14.1.5.5.7.01	2CCP*TCV144 FAILS AS-IS	X			
SQT-14.1.5.5.7.02	2FWE*HCV100C LOSS OF CONTROL SIGNAL TEST		X		
SQT-14.1.5.5.7.03	2FWE*HCV100A LOSS OF ACTUATOR POWER			X	
SQT-14.1.5.5.8.01	2CCP-192 STICKS OPEN				X
SQT-14.1.5.5.8.02	2FWE*101 STICKS CLOSED AFTER CLOSING	X			
SQT-14.1.5.5.8.03	2RHS*4 SEAT LEAKAGE TEST		X		
SQT-14.1.5.5.9.01	2CCP*E21A TUBE FOULING			X	
SQT-14.1.5.5.10.01	2RCS*PK444A OUTPUT FAILS TO 35 PERCENT				X
SQT-14.1.5.5.10.02	2SVS*PCV101A OUTPUT FAILS AT 80 PERCENT IN AUTOMATIC	X			
SQT-14.1.5.5.10.03	2FWS*FCV478 OUTPUT OSCILLATIONS IN AUTOMATIC		X		
SQT-14.1.5.5.10.04	2CNM-LC101 OUTPUT FAILS TO 100 PERCENT			X	
SQT-14.1.5.5.11.01	2RCS*TE420 OUTPUT FAILS TO 565 DEG F				X
SQT-14.1.5.5.11.02	2FWS*FT476 OPERATING BIAS OF -5 PERCENT	X			
SQT-14.1.5.5.12.01	2RCS-TSH471 ACTUATES		X		

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SQT TEST NUMBER	TEST DESCRIPTION	YEAR TO BE TESTED			
		2000	2001	2002	2003
Malfunction Tests					
SQT-14.1.5.5.12.02	2RCS-TSH412D-2 INHIBITED			X	
SQT-14.1.5.5.12.03	2CHS-TSH143 FAILS AS-IS			X	
TESTS PER YEAR		65	66	66	66
TOTAL TESTS		263			