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ROCHESTER GAS & ELECTRIC CORPORATION GINNA STATION	EFFECTIVE DATE: January 1, 1981		
		SIGNATURE	DATE
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TITLE: Appendix C - Ginna Station Inservice Pump and Valve Testing Program for the January 1, 1981 through December 31, 1990 Period	REVIEWED BY:	R C Mecredy	9/2/80
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Program Table of Contents

Introduction

This appendix to the Quality Assurance Manual defines the Inservice Pump and Valve Testing Program for the ten year period starting January 1, 1981 through December 31, 1990. Included in this program are the Quality Groups A, B and C Pumps which are provided with an emergency power source and those Quality Groups A, B and C Valves which are required to shut down the reactor or to mitigate the consequences of an accident and maintain the reactor in a safe shutdown condition.

This program has been developed as required by Section 50.55a(g) of 10CFR50 following the guidance of the ASME Boiler and Pressure Vessel Code Section XI - "Rules for Inservice Inspection of Nuclear Power Plant Components," (hereafter referred to as the "Code") excluding the controls of the Authorized Inspector, Enforcement Authority, Reporting Systems and N-Stamp Symbol. The inservice testing program shall be controlled by the Ginna Station Quality Assurance Program for Station Operation. Quality Groups A, B and C components correspond to those defined in NRC Regulatory Guide 1.26.

Further addenda and editions of Section XI of the Code shall be used for clarification of test requirements and performance.

The Inservice Pump and Valve Testing Program does not affect the pump and valve surveillance program required by Technical Specifications. Technical Specification requirements shall continue to be implemented at the required frequency.

Definitions

AFP	-	Auxiliary Feedwater Pump
AOV	-	Air Operated Valve
APV	-	Air Operated Piston Valve
BA	-	Boric Acid
Code	-	American Society of Mechanical Engineers Boiler and Pressure Vessel Code
CC	-	Component Cooling
CS	-	Containment Spray
CSP	-	Containment Spray Pump
CV	-	Check Valve
C/R	-	Cold Shutdown and Refueling
ECCS	-	Emergency Core Cooling System
FCV	-	Flow Control Valve
GA	-	Gas Analyzer
GDT	-	Gas Decay Tank
HCV	-	Hand Control Valve
HX	-	Heat Exchanger
LCV	-	Level Control Valve
MAFP	-	Motor Driven Auxiliary Feedwater Pump
MOV	-	Motor Operated Valve
MV	-	Manual Valve
PCV	-	Pressure Control Valve
PIV	-	Primary Isolation Valve
PORV	-	Power Operated Relief Valve
PRT	-	Pressurizer Relief Tank
PRV	-	Pressure Relief Valve
PVT	-	Pump and Valve Testing
Q	-	Quarterly
R	-	Refueling Outage
RCDT	-	Reactor Coolant Drain Tank
RCP	-	Reactor Coolant Pump
RCV	-	Radiation Control Valve
RHR	-	Residual Heat Removal
RMW	-	Reactor Makeup Water
RV	-	Relief Valve
RWST	-	Refueling Water Storage Tank
RX	-	Reactor Vessel
S/G	-	Steam Generator
SAFWP	-	Standby Auxiliary Feedwater Pump
SI	-	Safety Injection
SIV	-	Secondary Isolation Valve
SOV	-	Solenoid Operated Valve
SW	-	Service Water

Definitions

TAFP	-	Turbine Driven Auxiliary Feedwater Pump
VC	-	Volume Control
VCT	-	Volume Control Tank
VH	-	Vent Header

Pump and Valve Testing Program

PVT 1.0 Scope and Responsibility

1.1 The inservice testing program defines the testing program for Quality Groups A, B and C Pumps and Valves in accordance with the requirements of Articles IWP and IWV of Section XI of the Code. The results of these tests are to assure the operational readiness of pumps and valves.

1.2 It is the responsibility of the Ginna Station Test and Results Supervisor to implement this test program and develop inservice test procedures which will outline the specific test for each pump and valve included in the program.

1.3 When a valve, pump or its control system has been replaced or repaired or has undergone maintenance that could affect its performance, and prior to the time it is returned to service, it shall be tested as necessary to demonstrate that the performance parameters which could have been affected by the replacement, repair, or maintenance are within acceptable limits.

PVT 2.0 Code Edition and Testing Interval

2.1 The Inservice Pump and Valve Testing Program for the ten (10) year period starting January 1, 1981 through December 31, 1990 was developed utilizing the 1977 Edition of Section XI of the Code through the Summer 1978 Addenda.

PVT 3.0 Inservice Pump Testing Program

3.1 The Inservice Pump Testing Program was developed in accordance with the requirements of Article IWP of Section XI of the Code. This program includes all Quality Group A, B and C pumps which are provided with an emergency power source and are required to perform a specific function in shutting down a reactor or in mitigating the consequences of an accident.

3.2 The following pumps shall be tested in accordance with Article IWP of Section XI:

(a) 1A Component Cooling
(b) 1B Component Cooling
(c) 1A Safety Injection
(d) 1B Safety Injection
(e) 1C Safety Injection
(f) 1A Residual Heat Removal
(g) 1B Residual Heat Removal
(h) 1A Containment Spray
(i) 1B Containment Spray
(j) 1A Motor Driven Auxiliary Feedwater
(k) 1B Motor Driven Auxiliary Feedwater
(l) Turbine Driven Auxiliary Feedwater
(m) 1A Service Water
(n) 1B Service Water
(o) 1C Service Water
(p) 1D Service Water
(q) 1C Standby Auxiliary Feedwater
(r) 1D Standby Auxiliary Feedwater

3.3 Flow rates will not be accurate for the residual heat removal pumps because the bypass test loop can only pass 200 gpm. This bypass test loop is a fixed resistance system; therefore, hydraulic resistance remains unchanged from test to test.

3.4 Bearing temperatures will not be available for the Service Water pumps. These pumps and their bearings are submersed in forty feet of water, making it impossible to take measurements. Because they are submersed, the bearing temperatures stay very close to the temperature of the intake water.

PVT 4.0 <u>Inservice Valve Testing Program</u>

4.1 The Inservice Valve Testing Program was developed in accordance with the requirements of Article IWV of Section XI of the Code. All those valves that are required to perform a specific function either to shut down the reactor to the cold shutdown condition or in mitigating the consequences of an accident are included in the program.

4.2 The Inservice Valve Testing Program Requirements for Category A and B Valves are in Tables PVT 4.7 and 4.8, respectively. Category C Valves are broken down into two categories, Check Valves and Relief Valves, which are in Tables PVT 4.9 and 4.10, respectively. Category D Valves are not included in this testing program because there are none included in Ginna Station design.

4.3 Some exceptions and exemptions to the testing requirements of Article IWV have been taken based on operational interference, placing the plant in an unsafe condition and Technical Specification requirements. All exceptions and exemptions are listed on the valve tables and explained in the referenced notes, PVT 4.11.

4.4 The exercising program for Category A and B Valves, with the exception of check valves, shall require a complete stroking of each valve per the valve testing tables. All check valves, including Category C Valves, shall be exercised to the position required to fulfill their function. These functional tests shall be verified by the operation of the required system.

4.5 Category A and B valves operation shall be timed each time they are stroked utilizing switch initiation and the position indicators, which are accessible during plant operation. During each refueling outage a visual verification shall be made to confirm direct correspondence between valve operators and the position indicators.

4.6 The testing of valves required at cold shutdown and refueling outages will normally take four (4) days to complete. When cold shutdowns are of a shorter duration (2-3 days), test personnel shall attempt to test as many valves as possible without holding up the startup of the unit with testing beginning no longer than 48 hours after the plant reaches cold shutdown (as defined in Technical Specification 1.2). For very short cold shutdowns (less than 48 hours), it would be impossible to mobilize test personnel to implement the testing program under the required procedural controls, therefore no valves would be tested. It is possible that, during a four (4) day cold shutdown, the work load on test personnel may preclude their completion of all the required valve tests prior to startup. Valve testing during cold shutdowns need not be more frequent than one test per quarter for each valve in the test program.

4.7 Category A Valves

Valve #	Type	Description	Note	Test	Freq
304A	CV	1-A RCP Seal Injection	1	Stroke Leak	C/R R
304B	CV	1-B RCP Seal Injection	1	Stroke Leak	C/R R
313	MOV	Seal Water Return Isolation	1	Stroke Leak	C/R R
370B	CV	Charging Line Isolation	2	Stroke Leak	C/R R
371	AOV	Letdown Isolation	3	Stroke Leak	C/R R
383B	CV	Alternate Charging Line	4	Stroke Leak	C/R R
508	AOV	RMW to Containment Vessel Stop	-	Stroke Leak	Q R

Valve #	Type	Description	Note	Test	Freq
528	CV	N_2 Supply to PRT	-	Stroke Leak	Q R
529	CV	RMW to PRT	-	Stroke Leak	Q R
539	AOV	PRT Stop Valve to Gas Analyzer	-	Stroke Leak	Q R
743	CV	CC From Excess Letdown HX.	-	Stroke Leak	Q R
745	AOV	Return From Excess Letdown HX.	-	Stroke Leak	Q R
750A	CV	CC to A RCP	5	Stroke Leak	C/R R
750B	CV	CC to B RCP	5	Stroke Leak	C/R R
759A	MOV	Containment Stop CC From Loop A RCP	5	Stroke Leak	C/R R
759B	MOV	Containment Stop CC From Loop B RCP	5	Stroke Leak	C/R R
813	MOV	Supply CC to RX Support Coolers	6	Stroke Leak	C/R R
814	MOV	Return CC to RX Support Coolers	6	Stroke Leak	C/R R
846	AOV	N_2 Supply to Accumulators	-	Stroke Leak	Q R
862A	CV	1-A CSP Disch	-	Stroke Leak	Q R
862B	CV	1-B CSP Disch	-	Stroke Leak	Q R

Valve #	Type	Description	Note	Test	Freq
870A	CV	1-A to 1-C SI Pump Disch	-	Stroke Leak	Q R
870B	CV	1-B to 1-C SI Pump Disch	-	Stroke Leak	Q R
879	MV	SI Test Line Isolation	7	Stroke Leak	- R
889A	CV	1-A SI Pump Disch	-	Stroke Leak	Q R
889B	CV	1-B SI Pump Disch	-	Stroke Leak	Q R
956A	MV	Pressurizer Liquid Space Containment Isolation	-	Stroke Leak	Q R
956B	MV	Loop A and Loop B Hot Leg Containment Isolation	-	Stroke Leak	Q R
956C	MV	Pressurizer Steam Space Containment Isolation	-	Stroke Leak	Q R
966A	AOV	Pressurizer Steam Space Containment Isolation	-	Stroke Leak	Q R
966B	AOV	Pressurizer Liquid Space Containment Isolation	-	Stroke Leak	Q R
966C	AOV	Loop A and B Hot Leg Containment Isolation	-	Stroke Leak	Q R
1003A	LCV	1-A RCDT Pump Suction	-	Stroke Leak	Q R
1003B	LCV	1-B RCDT Pump Suction	-	Stroke Leak	Q R
1076A	MV	Hydrogen to "A" Recombiner Pilot Containment Isolation	11	Stroke Leak	- R
IV-3A	SOV	Hydrogen to "A" Recombiner Pilot Containment SIV	11	Stroke Leak	- R

Valve #	Type	Description	Note	Test	Freq
1076B	MV	Hydrogen to "B" Recombiner Pilot Containment Isolation	11	Stroke Leak	- R
IV-3B	SOV	Hydrogen to "B" Recombiner Pilot Containment SIV	11	Stroke Leak	- R
1080A	MV	Oxygen Make Up to Containment PIV	11	Stroke Leak	- R
IV-2A		Oxygen Make Up to Containment SIV (A Recombiner)	11	Stroke Leak	- R
IV-2B		Oxygen Make Up to Containment SIV (B Recombiner)	11	Stroke Leak	- R
1084A	MV	Hydrogen to "A" Recombiner Main Burner Containment PIV	11	Stroke Leak	- R
IV-5A	SOV	Hydrogen to "A" Recombiner Main Burner Containment SIV	11	Stroke Leak	- R
1084B	MV	Hydrogen to "B" Recombiner Main Burner Containment PIV	11	Stroke Leak	- R
IV-5B	SOV	Hydrogen to "B" Recombiner Main Burner Containment SIV	11	Stroke Leak	- R
1596	MV	Radiation Monitor Supply	-	Stroke Leak	Q R
1597	AOV	Radiation Monitor Supply	-	Stroke Leak	Q R
1598	AOV	Radiation Monitor Exhaust	-	Stroke Leak	Q R
1599	CV	Radiation Monitor Exhaust Inside Containment	-	Stroke Leak	Q R
1713	CV	N_2 to RCDT Check	-	Stroke Leak	Q R
1721	AOV	Suction line to RCDT	-	Stroke Leak	Q R

Valve #	Type	Description	Note	Test	Freq
1723	AOV	A Containment Sump Disch Stop to Waste Holdup Tank	-	Stroke Leak	Q R
1728	AOV	A Containment Sump Disch Stop to Waste Holdup Tank	-	Stroke Leak	Q R
1786	AOV	RCDT to VH	21	Stroke Leak	Q R
1787	AOV	RCDT to VH	-	Stroke Leak	Q R
1789	AOV	RCDT to GA Containment Isolation	-	Stroke Leak	Q R
5392	AOV	Instrument Air to Containment Isolation	19	Stroke Leak	R R
5393	CV	Instrument to Containment Isolation	19	Stroke Leak	R R
5735	AOV	"A" S/G Blowdown Sample Isolation	-	Stroke Leak	Q R
5736	AOV	"B" S/G Blowdown Sample Isolation	-	Stroke Leak	Q R
5737	AOV	"B" S/G Blowdown Isolation	-	Stroke Leak	Q R
5738	AOV	"A" S/G Blowdown Isolation	-	Stroke Leak	Q R
5869	APV	Containment Purge Supply Isolation	-	Stroke Leak	Q R
5870	APV	Containment Purge Supply Isolation	-	Stroke Leak	Q R
5878	APV	Containment Purge Exhaust Isolation	-	Stroke Leak	Q R
5879	APV	Containment Purge Exhaust Isolation	-	Stroke Leak	Q R

Valve #	Type	Description	Note	Test	Freq
6151	MV	Heating Steam to Containment	11	Stroke Leak	- R
6175	MV	Condensate Return from Containment	11	Stroke Leak	- R
7141	MV	Service Air Isolation Outside Containment	11	Stroke Leak	- R
7226	CV	Service Air Isolation Inside Containment	11	Stroke Leak	- R
7443	MOV	Containment Air Test Supply	11	Stroke Leak	- R
7444	MOV	Containment Air Test Vent	11	Stroke Leak	- R
7445	MOV	Containment Air Test Vent	11	Stroke Leak	- R
7970	AOV	Containment Depressurization Valve	-	Stroke Leak	Q R
7971	AOV	Containment Depressurization Valve	-	Stroke Leak	Q R
8418	AOV	Demin. Water to Containment Isolation	11	Stroke Leak	- R
8419	CV	Demin. Water to Containment Isolation	11	Stroke Leak	- R

4.8 Category B Valves

Valve #	Type	Description	Note	Test	Freq
014	RCV	Aux Building GDT Release	-	Stroke	Q
017	RCV	Comp Cool Surge Tank Vent	-	Stroke	Q
081	APV	Control Room Ventilation Damper	-	Stroke	Q

Valve #	Type	Description	Note	Test	Freq
082	APV	Control Room Ventilation Damper	-	Stroke	Q
083	APV	Control Room Ventilation Damper	-	Stroke	Q
084	APV	Control Room Ventilation Damper	-	Stroke	Q
085	APV	Control Room Ventilation Damper	-	Stroke	Q
086	APV	Control Room Ventilation Damper	-	Stroke	Q
112B	LCV	Emergency Makeup RWST to Charging Pump	-	Stroke	Q
112C	LCV	VCT Outlet	-	Stroke	Q
427	AOV	Letdown From Loop B	3	Stroke	C/R
430	PORV	Reactor Coolant System Pressure Relief	16	Stroke	R
431C	PORV	Reactor Coolant System Pressure Relief	16	Stroke	R
624	HCV	1-B RHR HX Outlet	-	Stroke	Q
625	HCV	1-A RHR HX Outlet	-	Stroke	Q
626	FCV	RHR Loop Return	-	Stroke	Q
700	MOV	Suction Stop From Loop A to RHR Pumps	8	Stroke	C/R
701	MOV	Suction Stop From Loop A to RHR Pumps	8	Stroke	C/R
704A	MOV	Suction 1-A RHR Pump	-	Stroke	Q
704B	MOV	Suction 1-B RHR Pump	-	Stroke	Q

Valve #	Type	Description	Note	Test	Freq
720	MOV	10" Discharge to B Loop From RHR Pumps	8	Stroke	C/R
721	MOV	10" Disch to B Loop From RHR Pumps	8	Stroke	C/R
738A	MOV	CC to 1-A RHR HX	-	Stroke	Q
738B	MOV	CC to 1-B RHR HX	-	Stroke	Q
825A	MOV	SI Pump Suction From RWST	9	Stroke	C/R
825B	MOV	SI Pump Suction From RWST	9	Stroke	C/R
826A	MOV	SI Pump Suction From BA Tank	-	Stroke	Q
826B	MOV	SI Pump Suction From BA Tank	-	Stroke	Q
826C	MOV	SI Pump Suction From BA Tank	-	Stroke	Q
826D	MOV	SI Pump Suction From BA Tank	-	Stroke	Q
836A	HCV	Spray Additive Tank Discharge	17	Stroke	Q
836B	HCV	Spray Additive Tank Discharge	17	Stroke	Q
850A	MOV	Sump B to RHR Pumps	-	Stroke	Q
850B	MOV	Sump B to RHR Pumps	-	Stroke	Q
852A	MOV	RHR Pumps to Reactor Vessel	18	Stroke	C/R
852B	MOV	RHR Pumps to Reactor Vessel	18	Stroke	C/R
856	MOV	RWST to RHR Pumps.	9	Stroke	C/R
857A	MOV	Isolate 1B RHR HX From CS and SI Pumps	-	Stroke	Q
857B	MOV	Isolate 1A RHR HX From CS and SI Pumps	-	Stroke	Q

Valve #	Type	Description	Note	Test	Freq
857C	MOV	Isolate 1A RHR HX From CS and SI Pumps	-	Stroke	Q
860A	MOV	Parallel Discharge MOV From 1-A CSP	-	Stroke	Q
860B	MOV	Parallel Discharge MOV From 1-A CSP	-	Stroke	Q
860C	MOV	Parallel Discharge MOV From 1-B CSP	-	Stroke	Q
860D	MOV	Parallel Discharge MOV From 1-B CSP	-	Stroke	Q
871A	MOV	1-A to 1-C SI Pump Discharge	-	Stroke	Q
871B	MOV	1-B to 1-C SI Pump Discharge	-	Stroke	Q
875A	MOV	Parallel MOV From CS Pumps to 1A Charcoal Filter Deluge	-	Stroke	Q
875B	MOV	Parallel MOV From CS Pumps to 1A Charcoal Filter Deluge	-	Stroke	Q
876A	MOV	Parallel MOV From CS Pumps to 1B Charcoal Filter Deluge	-	Stroke	Q
876B	MOV	Parallel MOV From CS Pumps to 1B Charcoal Filter Deluge	-	Stroke	Q
896A	MOV	RWST to CS and SI Pumps	9	Stroke	C/R
896B	MOV	RWST to CS and SI Pumps	9	Stroke	C/R
951	AOV	Pressurizer Steam Space Sample	-	Stroke	Q
953	AOV	Pressurizer Liquid Space Sample	-	Stroke	Q
955	AOV	"B" Loop Hot Leg Sample	-	Stroke	Q
959	AOV	RHR Loop Sample	20	Stroke	C/R

Valve #	Type	Description	Note	Test	Freq
1815A	MOV	C-SI Pump Suction From RWST	-	Stroke	Q
1815B	MOV	C-SI Pump Suction From RWST	-	Stroke	Q
3504	MOV	Main Steam to TAFP From 1-B S/G	-	Stroke	Q
3505	MOV	Main Steam to TAFP From 1-A S/G	-	Stroke	Q
3652	MV	Main Steam Throttle Valve to TAFP	-	Stroke	Q
3996	MOV	TAFP Discharge	-	Stroke	Q
4000A	MOV	Cross Over Valve For MAFP	-	Stroke	Q
4000B	MOV	Cross Over Valve For MAFP	-	Stroke	Q
4007	MOV	1-A MAFP Discharge	-	Stroke	Q
4008	MOV	1-B MAFP Discharge	-	Stroke	Q
4013	MOV	TAFP Service Water Supply Isolation	-	Stroke	Q
4027	MOV	1-A MAFP Service Water Isolation	-	Stroke	Q
4028	MOV	1-B MAFP Service Water Isolation	-	Stroke	Q
4291	AOV	TAFP Recir. Line	-	Stroke	Q
4297	AOV	TAFP Discharge to 1-A S/G	-	Stroke	Q
4298	AOV	TAFP Discharge to 1-B S/G	-	Stroke	Q
4304	AOV	1-A MAFP Recirculation Control	-	Stroke	Q
4310	AOV	1-B MAFP Recirculation Control	-	Stroke	Q

Valve #	Type	Description	Note	Test	Freq
4561	AOV	Containment Vent Recirc. Fans Discharge Flow Control	-	Stroke	Q
4562	AOV	Containment Vent Recirc. Fans Discharge Flow Control Bypass	-	Stroke	Q
4609	MOV	1A1 Screen House SW Isolation	-	Stroke	Q
4613	MOV	1B2 Turbine Building SW Isolation	-	Stroke	Q
4614	MOV	1A1 Turbine Building SW Isolation	-	Stroke	Q
4615	MOV	1B1 Aux. Building SW Isolation	-	Stroke	Q
4616	MOV	1A1 Aux. Building SW Isolation	-	Stroke	Q
4663	MOV	1A1 Air Cond. Chillers SW Isolation	-	Stroke	Q
4664	MOV	1A2 Turbine Building SW Isolation	-	Stroke	Q
4670	MOV	1B1 Turbine Building SW Isolation	-	Stroke	Q
4733	MOV	1A2 Air Cond. Chillers SW Isolation	-	Stroke	Q
4734	MOV	1B2 Aux. Build. SW Isolation	-	Stroke	Q
4735	MOV	1A2 Aux. Build. SW Isolation	-	Stroke	Q
4780	MOV	1A2 Screen House SW Isolation	-	Stroke	Q

Valve #	Type	Description	Note	Test	Freq
5171	MOV	Turbine Build. Fire Water Loop Supply Isolation	-	Stroke	Q
5871	APV	Containment Post Accident Filter Damper	-	Stroke	Q
5872	APV	Containment Post Accident Filter Damper	-	Stroke	Q
5873	APV	Containment Post Accident Filter Damper	-	Stroke	Q
5874	APV	Containment Post Accident Filter Damper	-	Stroke	Q
5875	APV	Containment Post Accident Filter Damper	-	Stroke	Q
5876	APV	Containment Post Accident Filter Damper	-	Stroke	Q
9629A	MOV	1C SAFP Service Water Isolation		Stroke	Q
9629B	MOV	1D SAFP Service Water Isolation		Stroke	Q
9701A	MOV	1C SAFP Discharge		Stroke	Q
9701B	MOV	1D SAFP Discharge		Stroke	Q
9703A	MOV	SAFP Cross Over		Stroke	Q
9703B	MOV	SAFP Cross Over		Stroke	Q
9704A	MOV	1C SAFP Containment Isolation		Stroke	Q
9704B	MOV	1D SAFP Containment Isolation		Stroke	Q
9710A	AOV	1C SAFP Recirc. Control		Stroke	Q

Valve #	Type	Description	Note	Test	Freq
9710B	AOV	1D SAFP Recirc. Control		Stroke	Q

4.9 Category C Check Valves

Valve #	Type	Description	Note	Test	Freq
710A	CV	1-A RHR Pump Discharge	-	Stroke	Q
710B	CV	1-B RHR Pump Discharge	-	Stroke	Q
723A	CV	1-A CC Pump Discharge	-	Stroke	Q
723B	CV	1-B CC Pump Discharge	-	Stroke	Q
842A	CV	First Check Valve in Loop A Accumulator Dump Line	-	Stroke	Q
842B	CV	First Check Valve in Loop B Accumulator Dump Line	-	Stroke	Q
847A	CV	A-CSP From Spray Additive Tank to Eductor	-	Stroke	Q
847B	CV	B-CSP From Spray Additive Tank to Eductor	-	Stroke	Q
853A	CV	Core Deluge Check	10	Stroke	R
853B	CV	Core Deluge Check	10	Stroke	R
854	CV	RWST to RHR Pump Check	-	Stroke	Q
866A	CV	CS Pump 1-A to Charcoal Filter Deluge	12	Stroke	C/R
866B	CV	CS Pump 1-B to Charcoal Filter Deluge	-	Stroke	Q
867A	CV	Accumulator Dump and SI to Cold Leg Loop B	13	Stroke	C/R
867B	CV	Accumulator Dump and SI to Cold Leg Loop A	13	Stroke	C/R

Valve #	Type	Description	Note	Test	Freq
878G	CV	1-A SI Pump to Cold Leg Loop B After MOV 878B	13	Stroke	C/R
878J	CV	1-B SI Pump to Cold Leg Loop A After MOV 878D	13	Stroke	C/R
3516	CV	1B S/G Main Steam Swing Check Stop Valve	14	Stroke	Start-up
3517	CV	1A S/G Main Steam Swing Check Stop Valve	14	Stroke	Start-up
3998	CV	TAFP Discharge Check	-	Stroke	Q
4000C	CV	1A MAFP Discharge Downstream MOV-4007	-	Stroke	Q
4000D	CV	1B MAFP Discharge Downstream MOV-4008	-	Stroke	Q
4003	CV	TAFP to S/G 1A	-	Stroke	Q
4004	CV	TAFP to S/G 1B	-	Stroke	Q
4009	CV	1A MAFP to S/G 1A	-	Stroke	Q
4010	CV	1B MAFP to S/G 1B	-	Stroke	Q
4014	CV	TAFP Condensate Suction	-	Stroke	Q
4016	CV	1B MAFP Suction	-	Stroke	Q
4017	CV	1A MAFP Suction	-	Stroke	Q
4023	CV	TAFP Recirculation	-	Stroke	Q
4601	CV	1A Service Water Pump Discharge	-	Stroke	Q
4602	CV	1B Service Water Pump Discharge	-	Stroke	Q

Valve #	Type	Description	Note	Test	Freq
4603	CV	1C Service Water Pump Discharge	-	Stroke	Q
4604	CV	1D Service Water Pump Discharge	-	Stroke	Q
5133	CV	Diesel Fire Pump Disch.	-	Stroke	Q
5136	CV	Motor Fire Pump Discharge	-	Stroke	Q
9627A	CV	1C SAFP SW Suction	-	Stroke	Q
9627B	CV	1D SAFP SW Suction	-	Stroke	Q
9700A	CV	1C SAFP Discharge	-	Stroke	Q
9700B	CV	1D SAFP Discharge	-	Stroke	Q
9705A	CV	1C SAFP to S/G 1A	-	Stroke	Q
9705B	CV	1D SAFP to S/G 1B	-	Stroke	Q

4.10 Category C Relief Valve

Valve #	Type	Description	Note	Test	Freq
203	RV	Letdown High Pressure Safety Relief	15	-	-
209	RV	Letdown Low Pressure Safety Relief	15	-	-
434	RV	Pressurizer Safety Relief	15	-	-
435	RV	Pressurizer Safety Relief	15	-	-
732	RV	CC Surge Tank Relief	15	-	-

Valve #	Type	Description	Note	Test	Freq
744	RV	CC From Excess Letdown Heat Exchanger	15	-	-
755A	RV	CC From A RCP Thermal Barrier	15	-	-
755B	RV	CC From B RCP Thermal Barrier	15	-	-
758A	RV	CC From A-RCP Oil Coolers	15	-	-
758B	RV	CC From B-RCP Oil Coolers	15	-	-
818	RV	CC From Reactor Support Coolers	15	-	-
861	RV	1-B CS Pump Suction Relief	15	-	-
887	RV	SI Test Line Inside Containment Relief	15	-	-
1817	RV	Alternate Suction From RHR Pump to C SI Pump	15	-	-
3508	RV	1-B S/G PRV	15	-	-
3509	RV	1-A S/G PRV	15	-	-
3510	RV	1-B S/G PRV	15	-	-
3511	RV	1-A S/G PRV	15	-	-
3512	RV	1-A S/G PRV	15	-	-
3513	RV	1-A S/G PRV	15	-	-
3514	RV	1-B S/G PRV	15	-	-
3515	RV	1-A S/G PRV	15	-	-
4653	RV	Service Water Relief	15	-	-
4654	RV	Service Water Relief	15	-	-

Valve #	Type	Description	Note	Test	Freq
4657	RV	Service Water Relief	15	-	-
5134	RV	Diesel Fire Pump Disch R.V.	15	-	-
5135	RV	Motor Fire Pump Disch R.V.	15	-	-

4.11 Inservice Valve Testing Notes

Note 1 - Valves 304A, 304B and 313 cannot be stroked during normal plant operation on a quarterly basis because they would interrupt coolant flow to the reactor coolant pump seals. These valves will be stroked at cold shutdowns and refueling outages.

Note 2 - Valve 370B cannot be stroked during normal plant operation on a quarterly basis because this test would interrupt charging pump flow. This valve will be stroked at cold shutdowns and refueling outages.

Note 3 - Valves 371 and 427 cannot be stroked during normal plant operation on a quarterly basis because this test would interrupt the letdown (CVCS) system. These valves will be stroked at cold shutdowns and refueling outages.

Note 4 - Valve 383B cannot be stroked during normal plant operation on a quarterly basis because this test would result in substantial radiation exposure to test personnel. Surveys in the area of the test connection during plant operation indicate neutron fields of approximately 500 mr/hr and a gamma fields of 250 mr/hr. This valve will be stroked at cold shutdowns and refueling outages.

Note 5 - Valves 750A, 750B, 759A and 759B cannot be stroked during normal plant operation on a quarterly basis because this test would require the reactor coolant pumps to be shut down to eliminate the flow through these checks and MOVs. These valves will be stroked at cold shutdowns and refueling outages.

Note 6 - Valves 813 and 814 cannot be stroked during normal plant operation on a quarterly basis because this test would remove the coolant to the reactor vessel supports and cavity wall. These valves will be stroked at cold shutdowns and refueling outages.

Note 7 - Valve 879 is a manual valve in the safety injection test line and is kept locked shut. This valve is not required to change position to perform a safety function. The only requirement is that leakage through valve 879 be acceptably low. Therefore, the quarterly stroke test has been deleted. This valve will be leak tested at refueling outages.

Note 8 - Valves 700 and 721 cannot be stroked during normal plant operation on a quarterly basis because there is an interlock system which prevents these valves from opening when the primary system is at operating pressure. Valves 700, 701, 720 and 721 separate a high pressure system from a low pressure system. These valves will be stroked at cold shutdowns and refueling outages.

Note 9 - Valves 825A, 825B, 856, 896A, and 896B should not be stroked during normal operation on a quarterly basis because this would cause a temporary loss of system

function of the ECCS. These valves provide the suction from the refueling water storage tank to the safety injection and residual heat removal pumps. These valves will be stroked at cold shutdowns and refueling outages.

Note 10- Valves 853A and 853B cannot be stroked during normal plant operation on a quarterly basis because this test require would pressurizing the RHR system to the primary system operation pressure. These valves will be stroked at refueling outages.

Note 11- Valves 1076A, 1076B, 1080A, 1084A, 1084B, IV-3A, IV-3B, IV-5A, IV-5B, IV-2A, IV-2B, 6151, 6175, 7141, 7226, 7443, 7444, 7445, 8418 and 8419 are considered passive valves which are not required to change position to acccomplish their specific function. Stroking these valves would serve no useful function and will therefore not be done.

Note 12- Valve 866A cannot be stroked during normal plant operation on a quarterly basis because this test would result in a substantial radiation exposure to test personnel. Surveys of the test location during operation indicate gamma fields of approximately 800 mr./hr. This valve will be stroked at cold shutdowns and refueling outages.

Note 13- Valves 867A, 867B, 878G, and 878J cannot be stroked during normal operation on a quarterly basis because this test cannot be done when the primary system is at operating pressure. This test may only be done when the plant is in a cold shutdown condition with a partially full primary system in order to prevent an overpressurization.

Note 14- Valves 3516 and 3517 cannot be stroked during normal plant operation on a quarterly basis because they are the main steam swing check stop valves. These valves are stroked during each plant startup.

Note 15- Category C Relief Valves shall be tested in accordance with the extent and frequency requirements of Paragraph IWV-3510 of Article IWV of Section XI of the Code.

Note 16- Valves 430 and 431C are the power operated relief valves associated with the overpressurization system. These valves shall not be stroked quarterly as they need not be operable when the plant is at normal system pressure. Operability of these valves shall be verified by calibration stroking at refueling shutdowns in accordance with Section 4.16.1 of Technical Specifications.

Note 17- Valve stroking will be normally accomplished monthly, except during cold and refueling shutdowns, consistent with the monthly Technical Specification requirement.

Note 18- Valves 852A and 852B cannot be stroked during normal plant operation as they serve as an Event V isolation valve configuration. These valves will be stroked at cold shutdowns and refueling outages.

Note 19- Stroking Valves 5392 and 5393 during operation and cold shutdown would interrupt instrument air to containment and be disruptive to air operated valves inside. These valves will be stroked at refueling outages.

Note 20- Valve 959 is normally closed and in the containment isolating position during normal operation. These valves will be stroked at cold shutdown and refueling outages.

Note 21- Valve 1786 is not required to function per FSAR Chapter 5 but valve receives a "T" Signal.

PVT 5.0 Records

5.1 Records for the Inservice Pump Testing Program shall be developed and maintained in accordance with Article IWP-6000 of Section XI of the Code.

5.2 Records for the Inservice Valve Testing Program shall be developed and maintained in accordance with Article IWV-6000 of Section XI of the Code.