

DUKE POWER COMPANY

OCONEE NUCLEAR STATION

SO-269/270/287

INSERVICE

INSPECTION

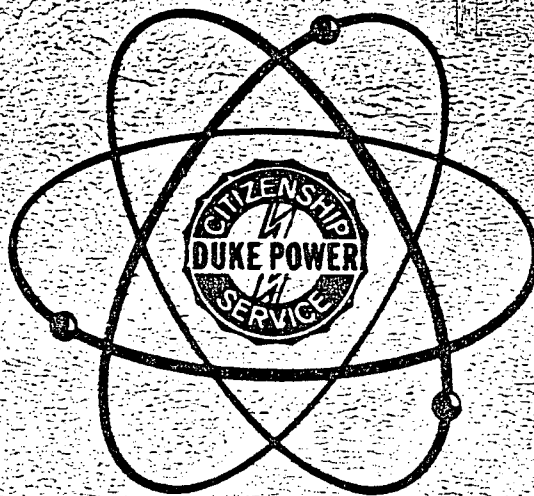
PROGRAM

Recd Ltr 5-15-79

7905300541

Rpt dtd MAY/1979.

RETURN TO REACTOR BASKET
123



OCONEE NUCLEAR STATION
INSERVICE INSPECTION PROGRAM

MAY, 1979

7905300550

1.0 INSERVICE INSPECTION PROGRAM

- 1.1 Inservice inspection will not be witnessed by an Authorized Inspector. Oconee Nuclear Station is located in South Carolina, a State which has not endorsed Section XI of the ASME Code. The Administrative organization and controls such as "Enforcement Authority", "Authorized Inspection", and "Authorized Inspection Agency" are not provided by the State.

Duke Power Company does however, have a corporate level quality assurance program which was established to comply with various regulations and standards as well as the ASME Code.

The duties of the Authorized Inspector, as stated in ASME Code Section XI, IWA-2120, are performed to the full extent by personnel within the Quality Assurance Department. This department of Duke Power Company is organizationally separate from those persons responsible for performing engineering, construction, or operating functions.

The personnel within the Quality Assurance Department have the required independence and authority to effectively carry out the quality assurance program without undue influence from those directly responsible for costs and schedules. (A complete description of this program is contained in Topical Report, "Quality Assurance Program", Duke - 1A.) In this regard, the required inservice examinations will be witnessed by Quality Assurance Department personnel in lieu of inspectors provided by an Authorized Inspection Agency. The independence and authority inherent in a third party inspector are thereby assured and the requirement of an outside inspector is unnecessary.

- 1.2 Applicable ASME Boiler and Pressure Vessel Code:

Unit 1 - 1974 Edition through Summer 1975 Addenda
Unit 2 - 1974 Edition through Summer 1975 Addenda
Unit 3 - 1974 Edition through Summer 1975 Addenda

- 1.3 Period for which program is applicable:

Unit 1 - Forty month period beginning November 15, 1976
Unit 2 - Forty month period beginning January 10, 1978
Unit 3 - Forty month period beginning January 10, 1978

- 1.4 Components to be examined:

Vessels, heat exchangers, pumps, valves, and piping, will be classified in accordance with 10CFR50.55a and NRC Regulatory Guide 1.26. For each ASME code class, systems have been identified which will be examined. Appropriate Duke drawings and documents provide the exact boundaries for each system to be examined.

Oconee Technical Specification 4.2 provides for the examination of specific primary nozzle to vessels welds and intervals of examination.

1.5 Examination and Repairs:

Appropriate examination categories and methods are contained in Table IWB-2600, Table IWC-2600, or Subsection IWD of Section XI.

In general, volumetric examination will be performed by ultrasonic techniques. Main steam and feedwater, however, will be radiographed where possible. Surface examination will be performed by dye penetrant or magnetic particle.

Repair procedures will be prepared as necessary by the Duke Power Company Steam Production Department. The Quality Assurance Department will review these procedures for compliance with Section XI. Re-examination to Section XI will be included in the repair process.

2.0 PUMP TESTING PROGRAM

2.1 Inservice pump testing conducted during cold shutdown shall:

- a. Be performed so as not to impact on the timely completion of shutdown related activities and subsequent return to power operation, and
- b. Be performed during each cold shutdown whose planned length is of sufficient duration to establish necessary test conditions and to perform the test.

Any testing not completed at one cold shutdown shall be performed at the next available cold shutdown consistent with the above criteria. Completion of all pump testing is not a prerequisite to return to power operation.

2.2 Applicable ASME Boiler and Pressure Vessel Code:

Unit 1 - 1974 Edition through Summer 1975 Addenda
Unit 2 - 1974 Edition through Summer 1975 Addenda
Unit 3 - 1974 Edition through Summer 1975 Addenda

2.3 Period for which program is applicable:

Unit 1 - twenty months beginning July 15, 1978
Unit 2 - twenty months beginning January 10, 1978
Unit 3 - twenty months beginning January 10, 1978

2.4 Pumps to be tested:

Pumps which are considered to be ASME Class 1, 2, or 3, when classified in accordance with NRC Regulatory Guide 1.26 and which are provided with an emergency power source will be tested. Tables of these pumps, parameters to be measured and test intervals are provided as follows:

Unit 1	Table 2-1
Unit 2	Table 2-2
Unit 3	Table 2-3

TABLE 2-1
OCONEE UNIT 1
PUMP TESTING PROGRAM

PUMPS	Frequency	Unit Status	Inlet Pressure (1)	Differential Pressure	Flow	Vibration	Lube Oil Level	Bearing Temperature	Shaft Speed
High Pressure Injection (1A, 1B, 1C)	Mo (2)	HS (AP)	X	X	X	X	NA	X	NA
Low Pressure Injection (1A, 1B, 1C)	Mo	(3)	X	X	X	X	X	X	NA
Reactor Building Spray (1A, 1B)	Mo (2)	HS (AP)	X	X	X	X	X	X	NA
Low Pressure Service Water (1A, 1B, 1C)	Mo	NA	X	X	X	X	X	X	NA
Spent Fuel Pool Cooling (1A, 1B)	Mo	NA (5)	X	X	X	X	X	X	NA
Emergency Feedwater	Mo	NA	X	X	X	X	X	X	X
Concentrated Boric Acid	Mo	NA (5)	X	X	(7)	X	(8)	X	NA

TABLE 2-2

OCONEE UNIT 2

PUMP TESTING PROGRAM

<u>PUMP</u>	Frequency	Unit Status	Inlet Pressure (1)	Differential Pressure	Flow	Vibration	Lube Oil Level	Bearing Temperature	Shaft Speed
High Pressure Injection (2A, 2B, 2C)	Mo (2)	HS (AP)	X	X	X	X	X	X	NA
Low Pressure Injection (2A, B2, 2C)	Mo	(3)	X	X	X	X	X	X	NA
Reactor Building Spray (2A, 2B)	Mo (2)	HS (AP)	X	X	X	X	X	X	NA
Emergency Feedwater	Mo	NA	X	X	X	X	X	X	X
Concentrated Boric Acid	Mo	NA	(5)	X	(7)	X	(8)	X	NA
Auxiliary Service Water	Mo	NA	(5)	(6)	(7)	X	X	X	NA

TABLE 2-3
OCONEE UNIT 3
PUMP TESTING PROGRAM

<u>PUMP</u>	Frequency	Unit Status	Inlet Pressure (1)	Differential Pressure	Flow	Vibration	Lube Oil Level	Bearing Temperature	Shaft Speed
High Pressure Injection (3A, 3B, 3C)	Mo (2)	HS (AP)	X	X	X	X	X	X	NA
Low Pressure Injection (3A, 3B, 3C)	Mo	(3)	X	X	X	X	X	X	NA
Reactor Building Spray (3A, 3B)	Mo (2)	HS (AP)	X	X	X	X	X	X	NA
Low Pressure Service Water (3A, 3B)	Mo	NA	X	X	(4)	X	X	X	NA
Spent Fuel Pool Cooling (3A, 3B)	Mo	NA	(5)	X	X	X	X	X	NA
Emergency Feedwater	Mo	NA	X	X	X	X	X	X	X
Concentrated Boric Acid	Mo	NA	(5)	X	(7)	X	(8)	X	NA

PUMP TESTING PROGRAM
NOTES AND REQUESTS FOR RELIEF

1. (a) Requirement: IWP-3300 (Table IWP-3100-1), Inlet Pressure (P_i) for all pumps which are in operation on a routing basis at the time the test is started.

(b) Reason: Several Systems are normally in operation with one or more pumps running. Taking inlet pressure prior to pump startup would require an additional swap-over to another pump. This (1) increases time required for the test, (2) causes additional wear and tear on the pumps, (3) on some systems could require additional Radiation dose during valve line up prior to swap-over and (4) presents additional opportunity for human error during swap-over which might damage system components.

(c) Proposed Testing: Inlet pressure will be taken prior to start-up of any standby pumps. Since in most systems standby and operating pumps are altered periodically, all pumps will be checked at one time or another. Also, on systems where the inlet piping is common, the operational pump will affect the inlet pressure of the standby pump so that operating pressure on one pump would be the same as pre-start pressure on the standby pump.
2. (a) Requirement: IWP-3300, IWP-3400; monthly testing during normal operation (HS - Hot shutdown)

(b) Reason: HPI and RB spray pumps cannot be operated at cold shutdown.

(c) Proposed Testing: They will be tested within 7 days after any cold shutdown which coincides with the due date of the test. (AP - Approach to power).
3. (a) Requirement: IWP-3300, IWP-3400 (a) Monthly testing during normal operation for LPI Pump.

(b) Reason: During normal plant operation, LPI pumps can be run only in recirculation mode to the BWST. The "A" pump can only be tested using a line-up which contains a 3 inch section of pipe. This restricts flow to a range from 1150 to 1550 Gpm. At this low flow, the installed flow and differential pressure instrumentation lacks the required accuracy and, due to pump head curve characteristics, repeatability is not readily assured.

(c) Proposed Testing: During cold shutdowns (or monthly in the event of frequent shutdowns) the "A" pumps can be fully tested in decay heat removal mode. During normal plant operation, the pumps could be operated in recirculation mode for 15 minutes or until vibration readings are taken, whichever is longer.

4. (a) Requirement: IWP-3300 (Table IWP-3100-1) Flow Measurement for Low Pressure Service Water Pump 3B.
(b) Reason: Two LPSW pumps supply two headers, LPA and LPB. A header can be isolated for testing flow through A pump. However, B pump flow cannot be measured since B header supplies all essential loads which cannot be isolated. Neither can B pump be lined up to A header.
(c) Proposed Testing: All other parameters will be tested on B pump. The ability of B pump to supply the normal requirements of B header (which is approximately the same as ES flow) will verify the general performance of the pump.
5. (a) Requirement: IWP-3300 (Table IWP-3100-1) Suction pressure measurement for Spent Fuel Pool cooling, concentrated boric acid, and auxiliary service water pumps.
(b) Reason: Suction pressure instrumentation does not exist for these pumps and station modifications would be required for installation of gauges.
(c) Proposed Testing: For the Spent Fuel Pool cooling pump, Spent Fuel Pool level will be used; for the concentrated boric acid pump, concentrated boric acid mix tank level will be used. For the auxiliary service water pump, no alternate means exists.
6. (a) Requirement: IWP-3300 (Table IWP-3100-1) Differential Pressure for Auxiliary Service Water Pump.
(b) Reason: No suction pressure instrumentation exists to determine the differential pressure value.
(c) Proposed Testing: None possible for this parameter.
7. (a) Requirement: IWP-3300 (Table IWP-3100-1) Flow for concentrated boric acid pump, and auxiliary service water pump.
(b) Reason: Flow measurement devices do not exist in these lines. A station modification would be required to install instrumentation.
(c) Proposed Testing: None possible for this parameter.
8. (a) Requirements: IWP-3300 (Table IWP-3100-1), Lube Oil Level for concentrated boric acid pump.
(b) Reason: This pump is a diaphragm pump with oil being the pumping medium as well as the lubricant. No indication exists to verify lube oil level without partial disassembly of the pump.
(c) Proposed Testing: Lube oil level checked during maintenance at least semi-annually.

3.0 VALVE TESTING PROGRAM

3.1 Inservice valve testing conducted during shutdown shall:

- a. Be performed so as not to impact on the timely completion of shutdown related activities and subsequent return to power operation, and
- b. Be performed during each cold shutdown whose planned length is of sufficient duration to establish necessary test conditions and to perform the test.

Any testing not completed at one cold shutdown shall be performed at the next available cold shutdown consistent with the above criteria. Completion of all valve testing is not a prerequisite to return to power operation.

3.2 Applicable ASME Boiler and Pressure Vessel Code:

Unit 1 - 1974 Edition through Summer 1975 Addenda
Unit 2 - 1974 Edition through Summer 1975 Addenda
Unit 3 - 1974 Edition through Summer 1975 Addenda

3.3 Period through which program is applicable:

Unit 1 - twenty months beginning July 15, 1978
Unit 2 - twenty months beginning January 10, 1978
Unit 3 - twenty months beginning January 10, 1978

3.4 Valves to be tested:

The inservice testing program for valves will be conducted consistent with the methods described in Subsection IWV of Section XI of the ASME code and the operability requirements of the Oconee Nuclear Station Technical Specifications. Tables of valves in categories A, B, C, D and E, their required tests, and frequency of testing are provided as follows:

Unit 1	Table 3-1
Unit 2	Table 3-2
Unit 3	Table 3-3

3.5 Generic Requests for Relief

a. All Category A Valves

Test Requirement: IWV-3420 Valve Leak Rate Test, Section (g), (2)

Bases for Relief: This paragraph is directed toward evaluating the trend of a valve's leak rate over a period of time. However, based on past test results, consistent trends in valve leak rates have not been observed, making it impossible to predict a particular valve's leak rate. In addition, in order to double the test frequency for a valve which exhibits a reduction in the margin between measured and permissible leak rates by greater than 50%, a shutdown midway between refueling outages would be required.

Alternate Testing: None proposed.

b. All Power Operated Valves

Test Requirement: IWV-3410 Valve Exercise Test, Section (c).

Bases for Relief: Power operated valves which operate with a very short full-stroke time are difficult to time accurately. In most cases the specified stroke time limit is substantially less than the actual full-stroke time. Therefore, the errors introduced in timing contribute significantly to failure to meet the acceptance criteria.

Alternate Testing: The testing frequency for valves with a previously measured stroke time less than or equal to one second which exhibit an increase in stroke time to 1.5 seconds or greater will be increased to monthly until corrective action is taken, at which time the original test frequency will be resumed.

TABLE 3-1

OCONEE UNIT 1

VALVE TESTING PROGRAM

DRAWING NO.
VALVE NO.

VALVE NAME

TYPE

LEAK TEST

EXERCISE TEST

SAFETY VALVE TEST

CHECK VALVE TEST

CATEGORY

LOCK OPEN/CLOSED

POSITION
INDICATION
AT REFUELLING

STROKE TIME
LIMITS (SEC)

PARTIAL OR
FULL STROKE

FREQUENCY

COMMENTS

PO-100A-1

IRC-67	Pressurizer Relief	R		X		C						
IRC-68	Pressurizer Relief	R		X		C						
ILP-45	Auxiliary Spray	M	X			A						
ILP-46	Auxiliary Spray Check Valve	C	X			A/C						

PO-101A-1

1HP-24	A HPI Pump Suct. from BWST	P	X			B		14	F	310		
1HP-25	C HPI Pump Suct. from BWST	P	X			B		14	F	310		
1HP-101	A HPI Suct. Check Vlv.	C			X	C			F	RF	1	
1HP-102	C HPI Suct. Check Vlv.	C			X	C			F	RF	1	
1HP-105	A HPI Disch. Check Vlv.	C			X	C			F	RF	2	
1HP-109	B HPI Disc. Check Vlv.	C			X	C			F	RF	2	
1HP-113	C HPI Disch. Check Vlv.	C			X	C			F	RF	2	
ICA-85	BAHT to LDST	C			X	C			F	310		
ICA-73	CBAST to LDST	C			X	C			F	310		
1HP-16	Makeup to LDST	P	X			B		5	F	310		

PO-101B-1

1HP-3	A LD Cooler Outlet	P	X	X		A	X	30	F	310		
1HP-4	B LD Cooler Outlet	P	X	X		A	X	30	F	310		

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
IHP-5	ID Cooler Isolation	P	X	X			A			4	F	S/D	4
IHP-20	RC Pump Seal Return	P	X	X			A		X	30	F	S/D	5
IHP-21	RC Pump Seal Return	P	X	X			A			4	F	S/D	6
IHP-26	A Loop Injection	P	X	X			A			14	F	S/D	7
IHP-27	B Loop Injection	P	X	X			A			14	F	3HO	
IHP-120	A Loop Injection	P	X	X			A			20	F	S/D	
IHP-188	B Loop Check Valve	C				X	C				F	RF	10
IHP-153	B Loop Check Valve	C	X			X	A/C				F	RF	9
IHP-152	B Loop Check Valve	C	X			X	A/C				F	RF	9
IHP-194	A Loop Check Valve	C				X	C				P/F	S/D	11
IHP-126	A Loop Check Valve	C	X			X	A/C				P/F	S/D	8
IHP-127	A Loop Check Valve	C	X			X	A/C				P/F	S/D	8
PO-102A-1													
ICF-1	A CFT Isolation Valve	P					E	X					
ICF-2	B CFT Isolation Valve	P					E	X					
ICF-5	A CFT Vent	P					E	X					
ICF-6	B CFT Vent	P					E	X					
ICF-11	A CFT Disch. CK Vlv.	C	X			X	A/C				P	S/D	13
ICF-12	A CFT Disc. CK Vlv.	C	X			X	A/C				P	S/D	13
ICF-13	B CFT Disch. CK Vlv.	C	X			X	A/C				P	S/D	13

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELLING	PARTIAL OR FULL STROKE STROKE TIME LIMITS (SEC)	FREQUENCY	COMMENTS
ICF-14	B CFT Disch. Ck Vlv.	C	X			X	A/C			P	S/D	13
ICF-33	CFT Vent to Vent Hdr.	H	X				A					14
ICF-35	CFT Vent to WG Filter	H	X				A					15
ICF-36	CFT Vent to Vent Hdr.	H	X				A					15
ILP-1	DH Isolation Valve	P	X	X			A			55 F	S/D	16
ILP-2	DH RB Isolation Valve	P	X	X			A		X	55 F	S/D	16
ILP-3	DH RB Isolation Valve	P		X			B			60 F	3HO	
ILP-17	LPI A RB Isol. Vlv.	P		X			B			15 F	3HO	
ILP-18	LPI B RB Isol. Vlv.	P		X			B			15 F	3HO	
ILP-19	RB Emerg. Sump	P		X			B			66 F	3HO	
ILP-20	RB Emerg. Sump	P		X			B			70 F	3HO	
ILP-21	BWST to LPI Suct.	P		X			B			15 F	3HO	
ILP-22	BWST to LPI Suct.	P		X			B			15 F	3HO	
ILP-29	BWST to A LPI Hdr.	C				X	C			F	1HO	
ILP-30	BWST to B LPI Hdr.	C				X	C			F	1HO	
ILP-31	A LPI Pump Disch.	C				X	C			P/F	HO/S/D	
ILP-33	B LPI Pump Disch.	C				X	C			P/F	HO/S/D	
ITEM DELETED												
ILP-28	BWST Isolation	H					E	X				
ICF-3	A CFT Sample	P	X				A			RF		12
ICF-4	B CFT Sample	P	X				A			RF		12

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
ICF-7	CFT to MWIUT	P	X				A				RF		12
ICF-19	CFT to Sample Sink	H	X				A				RF		12
IBS-7	A LPI Hdr. to RBS	C				X	C						
IBS-9	B LPI Hdr. to RBS	C				X	C						
ITEM DELETED													
ITEM DELETED													
ILP-47	A LPI Hdr. Ck. Vlv.	C	X			X	A/C						17
ILP-48	B LPI Hdr. Ck. Vlv.	C	X			X	A/C						17
ILP-103	Boron Dilution Vlv.	P		X			B		X	11.6	F	S/D	18
ILP-104	Boron Dilution Vlv.	P		X			B		X	7.2	F	S/D	18
ILP-105	Boron Dilution Vlv.	P		X			B		X	14	F	S/D	19
ILP-15	LPI A Hdr. to HPI	P		X			B			70	F	3HO	
ILP-16	LPI A Hdr. to HPI	P		X			B			70	F	3HO	
IBS-5	A RBS Check Vlv.	C				X	C				P	3HO	20
IBS-6	B RBS Check Vlv.	C				X	C				P	3HO	20
PO-103A-1													
IBS-1	A RBS RB Isol. Vlv.	P		X			B			37.5	F	3HO	
IBS-2	B RBS RB Isol. Vlv.	P		X			B			37.5	F	3HO	
IBS-11	A RBS Disch. Ck. Vlv.	C				X	C				P	1HO	21
IBS-14	A RBS Disch. Ck. Vlv.	C				X	C				F	5YR	22

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
1BS-16	B RBS Disch. Ck. Vlv.	C				X	C				F	1HO	21
1BS-19	B RBS Disch. Ck. Vlv.	C				X	C				F	5YR	22
PO-104A-1													
1SF-60	Fuel Transfer Canal Fill	H	X				A					RF	23
1SF-61	Fuel Transfer Canal Fill	H	X				A					RF	23
PO-106A-1													
1CS-64	CBAST Outlet	P		X			B			10	F	3HO	
PO-106E-1													
1DW-155	DW to RCP Seal Vent	C	X			X	A/C						25
1DW-156	DW to RCP Seal Vent	C	X			X	A/C						25
1DW-59	DW to RB	H	X	X			A					RF	24
1DW-60	DW to RB	H	X	X			A					RF	24
1FW-64	FW to RB	H	X	X			A					RF	24
1FW-65	FW to RB	H	X	X			A					RF	24
PO-107A-1													
1CS-5	QT RB Isol.	P	X	X			A		X	15	F	3HO	26
1CS-6	QT RB Isol.	P	X	X			A			5	F	3HO	

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELLING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
ICS-12	QT Recirc. Ck. Vlv.	C	X			X	A/C					RF	27
ICS-11	QT Recirc. Ck. Vlv.	C	X			X	A/C					RF	27
1GWD-12	QT Vent	P	X	X			A		X	15	F	3HO	
1GWD-13	QT Vent	P	X	X			A			15	F	3HO	
PO-107B-1													
11WD-1	Normal Sump Suct.	P	X	X			A			15	F	3HO	28
11WD-2	Normal Sump Suct.	P	X	X			A			15	F	3HO	28
PO-107D-1													
11WD-99	RB Sump to SAWT	H	X				A						29
11WD-103	RB Emerg. Sump Drain	H	X				A						29
PO-110A-1													
1CA-17	BAMT to Makeup Filters	C				X	C				F	3HO	
1CA-18	BAMT to Makeup Filters	H		X			B				F	3HO	
ITEM DELETED													
ITEM DELETED													
IRC-5	Press. Steam Sample	P	X	X			A		X	30	F	3HO	
IRC-6	Press. Water Sample	P	X	X			A		X	30	F	3HO	
IRC-7	Press. Sample	P	X	X			A			10	F	3HO	

DRAWING NO.
VALVE NO.

VALVE NAME

TYPE

LEAK TEST

EXERCISE TEST

CHECK VALVE TEST
SAFETY VALVE TEST

CATEGORY

LOCK OPEN/CLOSED

POSITION
INDICATION
AT REFUELING

STROKE TIME
LIMITS (SEC)

PARTIAL OR
FULL STROKE

FREQUENCY

COMMENTS

1FDW-105	OTSG A Sample	P	X	X		A		X	30	F	3HO	
1FDW-106	OTSG A Sample	P	X	X		A			10	F	3HO	
1FDW-107	OTSG B Sample	P	X	X		A		X	30	F	3HO	
1FDW-108	OTSG B Sample	P	X	X		A			10	F	3HO	

PO-116A-1

1PR-1	RB Purge Outlet	P	X	X		A		X	8	F	3HO	
1PR-2	RB Purge Outlet	P	X	X		A			5	F	3HO	
1PR-7	RB Radiation Monitor	P	X	X		A		X	10	F	3HO	30
1PR-8	RB Radiation Monitor	P	X	X		A			5	F	3HO	
1PR-9	RB Radiation Monitor	P	X	X		A		X	13	F	3HO	30
1PR-10	RB Radiation Monitor	P	X	X		A			5	F	3HO	
1PR-6	RB Purge Inlet	P	X	X		A		X	8	F	3HO	
1PR-5	RB Purge Inlet	P	X	X		A			5	F	3HO	

PO-121A-1

1FDW-93	EFDW to OTSG A	C			X	C				F	RF	31
1FDW-95	EFDW to OTSG B	C			X	C				F	RF	31

PO-121B-1B

1FDW-101	EFDW to OTSG A	C			X	C				F	RF	31
1FDW-39	EFDW to OTSG A	C			X	C				F	RF	34
1FDW-99	EFDW to OTSG B	C			X	C				F	RF	31

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
FDW-48	EFDW to OTSG B	C				X	C				F	RF	34
IFDW-33	EFDW to OTSG A	P		X			B			66	F	S/D	32
IFDW-35	EFDW to OTSG A	P		X			B				F	S/D	32
IFDW-36	EFDW to OTSG A	P		X			B			48	F	S/D	32
IFDW-38	EFDW to OTSG A	P		X			B			42	F	S/D	33
IFDW-42	EFDW to OTSG B	P		X			B			60	F	S/D	32
IFDW-44	EFDW to OTSG B	P		X			B				F	S/D	32
IFDW-45	EFDW to OTSG B	P		X			B			48	F	S/D	32
IFDW-47	EFDW to OTSG B	P		X			B			45	F	S/D	33
IFDW-232	EFDW to OTSG A	C				X	C				F	RF	34
IFDW-233	EFDW to OTSG B	C				X	C				F	RF	34
IFDW-103	OTSG A Shell Drain	P	X	X			A			25	F	S/D	35
IFDW-104	OTSG B Shell Drain	P	X	X			A			25	F	S/D	35
PO-122A-1													
IHS-1 Through	Main Steam Relief	R			X		C				F	3HO	
IHS-16													
IHS-83	MS A to EFPT Check	C				X	C				F	3HO	
IHS-85	MS B to EFPT Check	C				X	C				F	3HO	
IHS-91	MS to EFPT Supply Check	C				X	C				F	3HO	
IHS-93	EFPT Supply Trip Vlv.	P		X			B				F	3HO	

DRAWING NO.
VALVE NO.

VALVE NAME

TYPE

LEAK TEST

EXERCISE TEST

SAFETY VALVE TEST

CHECK VALVE TEST

CATEGORY

LOCK OPEN/CLOSED

POSITION
INDICATION
AT REFUELING

STROKE TIME
LIMITS (SEC)

PARTIAL OR
FULL STROKE

FREQUENCY

COMMENTS

PO-122B-1

1HS-102	HS Stop Vlv.	P	X	X		A		1	F	S/D	36
1HS-103	HS Stop Vlv.	P	X	X		A		1	F	S/D	36
1HS-104	HS Stop Vlv.	P	X	X		A		1	F	S/D	36
1HS-105	HS Stop Vlv.	P	X	X		A		1	F	S/D	36

PO-124B

1LPSW-7	RCP A1 Cooler Inlet	P	X	X		A	X	25	F	S/D	
1LPSW-8	RCP A1 Cooler Outlet	P	X	X		A	X	25	F	S/D	
1LPSW-9	RCP B1 Cooler Inlet	P	X	X		A	X	25	F	S/D	
1LPSW-10	RCP B1 Cooler Outlet	P	X	X		A	X	25	F	S/D	
1LPSW-11	RCP B2 Cooler Inlet	P	X	X		A	X	25	F	S/D	
1LPSW-12	RCP B2 Cooler Outlet	P	X	X		A	X	25	F	S/D	
1LPSW-13	RCP A2 Cooler Inlet	P	X	X		A	X	25	F	S/D	
1LPSW-14	RCP A2 Cooler Outlet	P	X	X		A	X	25	F	S/D	
1LPSW-6	LPSW to RCP Oil Coolers	P	X	X		A		55	F	S/D	37
1LPSW-15	LPSW from RCP Oil Coolers	P	X	X		A		55	F	S/D	37
1LPSW-18	LPSW to RBCU A	P		X		B		30	F	3HO	
1LPSW-21	LPSW to RBCU B	P		X		B		29	F	3HO	
1LPSW-24	LPSW to RBCU C	P		X		B		30	F	3HO	
1LPSW-4	LPSW DH Cooler Outlet	P		X		B		75.3	F	3HO	

DRAWING NO.
VALVE NO.

0-472

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT SHUTDOWN	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
0-472													
11RT-24	Leak Rate Test	H	X	X			A				F	3YR	47
11RT-25	Leak Rate Test	H	X	X			A				F	3YR	47
11RT-38	Leak Rate Test	H	X	X			A				F	3YR	48
11RT-39	Leak Rate Test	H	X	X			A				F	3YR	48
11A-90	1A to RB	H	X				A						46
11A-91	1A to RB	H	X				A						46
PO-127B													
1N-128	CFT A Supply	H	X				A					RF	39
1N-130	CFT B Supply	H	X				A					RF	39
1HP-155	CFT A Fill	H	X				A					RF	41
1HP-156	CFT B Fill	H	X				A					RF	41
PO-137													
1BA-5	BA Isolation	H	X				A					RF	42
1BA-33	BA Isolation	H	X				A					RF	42

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	FREQUENCY PARTIAL OR FULL STROKE STROKE TIME LIMITS (SEC)	COMMENTS
11.PSW-5	LPSW DH Cooler Outlet	P		X			B			69 F 3HO	
11.PSW-75	LPSW DH Cooler Outlet	C				X	C			F 1HO	
11.PSW-76	LPSW DH Cooler Outlet	C				X	C			F 1HO	
11.PSW-251	LPSW DH Cooler Outlet	P		X			B			45 F 3HO	
11.PSW-252	LPSW DH Cooler Outlet	P		X			B			45 F 3HO	
11.PSW-108	RBCU Outlet	H					E	X			
PO-127B											
1N-106	N ₂ Isolation	H	X				A			RF	38
1N-107	N ₂ Isolation	H	X				A			RF	38
1N-116	N ₂ Isolation	H	X				A			RF	38
1N-119	N ₂ Isolation	H	X				A			RF	38
1CA-27	N ₂ Isolation	H	X				A			RF	40
1CA-29	N ₂ Isolation	H	X				A			RF	40
PO-144A											
1CC-20	CC to RCP	C	X			X	A/C			RF	45
1CC-24	CC to RCP	C	X			X	A/C			RF	45
1CC-76	CC to CRD Service Structure	C	X			X	A/C			RF	45
1CC-77	CC to CRD Service Structure	C	X			X	A/C			RF	45
1CE-7	CC from RCP	P	X	X			A		X	45 F S/D	43
1CC-8	CC from RCP	P	X	X			A			18 F S/D	44

TABLE 3-2

OCONEE UNIT 2

VALVE TESTING PROGRAM

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE VALVE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	PARTIAL OR FULL STROKE STROKE TIME LIMITS (SEC)	FREQUENCY	COMMENTS
PO-100A-2												
2RC-67	Pressurizer Relief	R		X			C					
2RC-68	Pressurizer Relief	R			X		C					
2LP-45	Auxiliary Spray	M	X				A					
2LP-46	Auxiliary Spray Check Valve	C	X				A/C					
PO-101A-2												
2HP-16	Make up to LDST	P		X			B			5 F	3HO	
2HP-24	"A" HPI Pump Suct. from BWST	P		X			B			14 F	3HO	
2HP-25	"C" HPI Pump Suct. from BWST	P		X			B			14 F	3HO	
2HP-101	A HPI Suct. Check Vlv.	C				X	C			F	RF	1
2HP-102	C HPI Suct. Check Vlv.	C				X	C			F	RF	1
2HP-105	A HPI Disch. Check Vlv.	C				X	C			F	RF	2
2HP-109	B HPI Disch. Check Vlv.	C				X	C			F	RF	2
2HP-113	C HPI Disch. Check Vlv.	C				X	C			F	RF	2
2CA-73	CBAST to LDST	C				X	C			F	3HO	
2CA-85	DANT to LDST	C				X	C			F	3HO	
PO-101B-2												
2HP-3	A LD Cooler Outlet	P	X	X			A		X	30 F	3HO	3
2HP-4	B LD Cooler Outlet	P	X	X			A		X	30 F	3HO	3
2HP-5	LD Cooler Isolation	P	X	X			A			4 F	S/G	4
2HP-20	RC Pump Seal Return	P	X	X			A		X	30 F	S/G	5
2HP-21	RC Pump Seal Return	P	X	X			A			4 F	S/D	6

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	FREQUENCY PARTIAL OR FULL STROKE	COMMENTS
2HP-26	A Loop Injection	P	X	X			A			14	F	S/D 7
2HP-27	B Loop Injection	P	X	X			A			14	F	3MO
2HP-120	A Loop Injection	P	X	X			A			20	F	S/D
2HP-126	A Loop Check Valve	C	X			X	A/C				P/F	S/D 8
2HP-127	A Loop Check Valve	C	X			X	A/C				P/F	S/D 8
2HP-152	B Loop Check Valve	C	X			X	A/C				F	RF 9
2HP-153	B Loop Check Valve	C	X			X	A/C				F	RF 9
2HP-188	B Loop Check Valve	C				X	A/C				F	RF 10
2HP-194	A Loop Check Valve	C				X	A/C				P/F	S/D 11

PO-102A-2

2CF-1	A CFT Isol. Valve	P					E	X				
2CF-2	B CFT Isol. Valve	P					E	X				
2CF-3	A CFT Sample/Drain	P	X				A				RF	12
2CF-4	B CFT Sample/Drain	P	X				A				RF	12
2CF-5	A CFT Vent	P					E	X				
2CF-6	B CFT Vent	P					E	X				
2CF-7	CFT to HMIUT	H	X				A				RF	12
2CF-11	A CFT Disch. Check Vlv.	C	X			X	A/C				P	S/D 13
2CF-12	A CFT Disch. Check Vlv.	C	X			X	A/C				P	S/D 13
2CF-13	B CFT Disch. Check Vlv.	C	X			X	A/C				P	S/D 13
2CF-14	B CFT Disch. Check Vlv.	C	X			X	A/C				P	S/D 13

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	POSITION INDICATOR AT REFUELLING LOCK OPEN/CLOSED	STROKE TIME LIMITS (SEC)	FREQUENCY PARTIAL OR FULL STROKE	COMMENTS
2CF-19	CFT to Sample Sink	H	X				A			RF	12
2CF-33	CFT Vent to Vent HDR	H	X				A				14
2CF-35	CFT Vent to WG HDR	H	X				A				15
2CF-36	CFT Vent to Vent HDR	H	X				A				15
2LP-1	DH Isolation Vlv.	P	X	X			A	X	55	F S/D	16
2LP-2	DH RB Isolation Vlv.	P	X	X			A	X	55	F S/D	16
2LP-3	DH RB Isolation Vlv.	P		X			B		60	F 3HO	
2LP-15	LPI A HDR to HPI	P		X			B		70	F 3HO	18
2LP-16	LPI B HDR to HPI	P		X			B		70	F 3HO	18
2LP-17	LPI A RB Isolation Vlv.	P		X			B		15	F 3HO	
2LP-18	LPI B RB Isolation Vlv.	P		X			B		15	F 3HO	
2LP-19	RB Emerg. Sump	P		X			B		66	F 3HO	
2LP-20	RB Emerg. Sump	P		X			B		70	F 3HO	
2LP-21	BWST to LPI Suct.	P		X			B		15	F 3HO	
2LP-22	BWST to LPI Suct.	P		X			B		15	F 3HO	
2LP-28	BWST Isolation	H					E	X			
2LP-29	BWST to A LPI HDR	C				X	C			F 1HO	
2LP-30	BWST to B LPI HDR	C				X	C			F 1HO	
2LP-31	A LPI Pump Disch.	C				X	C			P/F HO/S/D	
2LP-33	B LPI Pump Disch.	C				X	C			P/F HO/S/D	
2LP-47	A LPI HDR Check Vlv.	C	X			X	A/C		F	S/D	17
2LP-48	B LPI HDR Check Vlv.	C	X			X	A/C		F	S/D	17

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REVEALING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
PO-102A-2													
ITEM DELETED													
2LP-103	Boron Dilution Vlv.	P		X			B		X	11.6	F	S/D	18
2LP-104	Boron Dilution Vlv.	P		X			B		X	7.2	F	S/D	18
2LP-108	Boron Dilution Vlv.	H		X			B				F	3HO	
2LP-109	Boron Dilution Vlv.	H		X			B				F	3HO	
2BS-5	A RBS Check	C				X	C				P	3HO	20
2BS-6	B RBS Check	C				X	C				P	3HO	20
2BS-7	A LPI HDR to RBS	C				X	C						
2BS-9	B LPI HDR to RBS	C				X	C						
PO-103A-2													
2BS-1	A RBS RB Isol. Valve	P		X			B			37.5	F	3HO	
2BS-2	B RBS RB Isol. Valve	P		X			B			37.5	F	3HO	
2BS-11	A RBS Disch. Check	C				X	C				P	HO	21
2BS-14	A RBS Disch. Check	C		X		X	C				F	5YR	22
2BS-16	B RBS Disch. Check	C				X	C				P	HO	21
2BS-19	B RBS Disch. Check	C				X	C				F	5YR	22
PO-104A-1													
2SF-60	Fuel Transfer Canal Fill	H	X				A				RF		23
2SF-61	Fuel Transfer Canal Fill	H	X				A				RF		23

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	CHECK VALVE TEST	SAFETY VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	PARTIAL OR FULL STROKE STROKE TIME LIMITS (SEC)	FREQUENCY	COMMENTS
PO-106A-1												
2CS-64	CBAST Outlet	P		X			B			10 F	3HO	
PO-106E-2												
2FW-64	Filtered Water to RB	H	X				A				RF	24
2FW-65	Filtered Water to RB	H	X				A				RF	24
2DW-59	DW to RB	H	X				A				RF	24
2DW-60	DW to RB	H	X				A				RF	24
PO-107A-2												
2CS-5	QT RB Isol.	P	X	X			A		X	15 F	3HO	26
2CS-6	QT RB Isol.	P	X	X			A			5 F	3HO	
2CS-11	QT Recirc. Check	C	X		X		A/C				RF	27
2CS-12	QT Recirc. Check	C	X		X		A/C				RF	27
2GWD-12	QT Vent	P	X	X			A		X	15 F	3HO	26
2GWD-13	QT Vent	P	X	X			A			15 F	3HO	
PO-107B-1												
2LWD-1	Normal Sump Suct.	P	X	X			A			15 F	3HO	28
2LWD-2	Normal Sump Suct.	P	X	X			A			15 F	3HO	
PO-107D-1												
2LWD-97	RB Sump to LAWf	H	X				A				RF	29
2LWD-103	RB Emerg. Sump Drn.	H	X				A				RF	29

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	FREQUENCY	COMMENTS
PO-110A-1												
2CA-17	BAMT to Makeup Filters	C				X	C			F	3HO	
2CA-18	BAMT to Makeup Filters	H		X			B			F	3HO	
ITEM DELETED												
ITEM DELETED												
2RC-5	Press Steam Sample	P	X	X			A			30 F	3HO	
2RC-6	Press Water Sample	P	X	X			A			30 F	3HO	
2RC-7	Press Sample	P	X	X			A			10 F	3HO	
2FDW-105	OTSG A Sample	P	X	X			A			30 F	3HO	
2FDW-106	OTSG A Sample	P	X	X			A			10 F	3HO	
2FDW-107	OTSG B Sample	P	X	X			A			30 F	3HO	
2FDW-108	OTSG B Sample	P	X	X			A			10 F	3HO	
PO-116A-2												
2PR-1	RB Purge Outlet	P	X	X			A		X	8 F	3HO	
2PR-2	RB Purge Outlet	P	X	X			A			5 F	3HO	
2PR-5	RB Purge Inlet	P	X	X			A			5 F	3HO	
2PR-6	RB Purge Inlet	P	X	X			A		X	8 F	3HO	
2PR-7	RB Radiation Monitor	P	X	X			A		X	10 F	3HO	30
2PR-8	RB Radiation Monitor	P	X	X			A			5 F	3HO	

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	CHECK VALVE TEST SAFETY VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	FULL STROKE PARTIAL OR	FREQUENCY	COMMENTS
2PR-9	RB Radiation Monitor	P	X	X		A		X	13	F	3MO	30
2PR-10	RB Radiation Monitor	P	X	X		A			5	F	3MO	
PO-121A-2												
2FDW-93	EFDW OTSG A	C			X	C				F	RF	31
2FDW-95	EFDW OTSG B	C			X	C				F	RF	31
PO-121B-2B												
2FDW-33	EFDW to OTSG A	P		X		B			66	F	S/D	32
2FDW-35	EFDW to OTSG A	P		X		B				F	S/D	32
2FDW-36	EFDW to OTSG A	P		X		B			48	F	S/D	32
2FDW-38	EFDW to OTSG A	P		X		B			42	F	S/D	33
2FDW-39	EFDW to OTSG A Check	C			X	C				F	RF	34
2FDW-42	EFDW to OTSG B	P		X		B			60	F	S/D	32
2FDW-44	EFDW to OTSG B	P		X		B				F	S/D	32
2FDW-45	EFDW to OTSG B	P		X		B			48	F	S/D	32
2FDW-47	EFDW to OTSG B	P		X		B			45	F	S/D	33
2FDW-48	EFDW to OTSG B Check	C			X	C				F	RF	34
2FDW-99	EFDW to OTSG A	C			X	C				F	RF	31
2FDW-101	EFDW to OTSG B	C			X	C				F	RF	31
2FDW-103	OTSG A Drain	P	X	X		A			25	F	S/D	35
2FDW-104	OTSG B Drain	P	X	X		A			25	F	S/D	35

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
2FDW-232	OTSG A Emerg. HDR Check	C				X	C				F	RF	34
2FDW-233	OTSG B Emerg. HDR Check	C				X	C				F	RF	34
PO-122A-2													
2HS-1-16	Main Steam Reliefs	R			X		C				F	S/D	
2HS-83	HS A to EFPT Check	C				X	C				F	3HO	
2HS-85	HS B to EFPT Check	C				X	C				F	3HO	
2HS-91	HS to EFPT Supply Check	C				X	C				F	3HO	
2HS-93	EFPT Supply Trip Vlv.	P		X			B				F	3HO	
PO-122B-2													
2MS-102	MS Stop Vlv.	P	X	X			A			1	F	S/D	36
2MS-103	MS Stop Vlv.	P	X	X			A			1	F	S/D	36
2MS-104	MS Stop Vlv.	P	X	X			A			1	F	S/D	36
2MS-105	MS Stop Vlv.	P	X	X			A			1	F	S/D	36
PO-124B													
21PSW-4	LPSW DH Cooler Outlet	P		X			B			75.3	F	3HO	
21PSW-5	LPSW DH Cooler Outlet	P		X			B			75.3	F	3HO	
21PSW-6	LPSW to RCP Oil Coolers	P	X	X			A			55	F	S/D	37
21PSW-7	RCP A1 Cooler Inlet	P	X	X			A			25	F	S/D	
21PSW-8	RCP A1 Cooler Outlet	P	X	X			A		X	25	F	S/D	

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	CHECK VALVE TEST	SAFETY VALVE TEST	CATEGORY	POSITION INDICATION AT REFUELING LOCK OPEN/CLOSED	PARTIAL OR FULL STROKE STROKE TIME LIMITS (SEC)	FREQUENCY	COMMENTS
21.PSW-9	RCP B1 Cooler Inlet	P	X	X			A	X	25 F	S/D	
21.PSW-10	RCP B1 Cooler Outlet	P	X	X			A	X	25 F	S/D	
21.PSW-11	RCP B2 Cooler Inlet	P	X	X			A	X	25 F	S/D	
21.PSW-12	RCP B2 Cooler Outlet	P	X	X			A	X	25 F	S/D	
21.PSW-13	RCP A2 Cooler Inlet	P	X	X			A	X	25 F	S/D	
21.PSW-14	RCP A2 Cooler Outlet	P	X	X			A	X	25 F	S/D	
21.PSW-15	LPSW from RCP Oil Coolers	P	X	X			A		55 F	S/D	37
21.PSW-16	LPSW to RBCU A	P		X			B		40 F	3HO	
21.PSW-18	LPSW from RBCU A	P		X			B		30 F	3HO	
21.PSW-19	LPSW to RBCU B	P		X			B		42 F	3HO	
21.PSW-21	LPSW from RBCU B	P		X			B		29 F	3HO	
21.PSW-22	LPSW to RBCU C	P		X			B		42 F	3HO	
21.PSW-24	LPSW from RBCU C	P		X			B		30 F	3HO	
21.PSW-75	LPSW DH Cooler Outlet	C			X		C		F	HO	
21.PSW-76	LPSW DH Cooler Outlet	C			X		C		F	HO	
21.PSW-108	RBCU Outlet	H					E	X			
21.PSW-251	LPSW DH Cooler Outlet	P		X			B		45 F	3HO	
21.PSW-252	LPSW DH Cooler Outlet	P		X			B		45 F	3HO	
PO-127D											
2CA-27	N ₂ Isolation	H	X				A			RF	40
2CA-29	N ₂ Isolation	H	X				A			RF	40

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	CHECK VALVE TEST	SAFETY VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	PARTIAL OR FULL STROKE STROKE TIME LIMITS (SEC)	FREQUENCY	COMMENTS
PO-127B												
2HP-155	N ₂ Isolation	H	X				A				RF	41
2HP-156	N ₂ Isolation	H	X				A				RF	41
2N-106	N ₂ Isolation	H	X				A				RF	38
2N-107	N ₂ Isolation	H	X				A				RF	38
2N-116	N ₂ Isolation	H	X				A				RF	38
2N-119	N ₂ Isolation	H	X				A				RF	38
2N-128	CFT Supply	H	X				A				RF	39
2N-130	CFT Supply	H	X				A				RF	39
PO-137												
2BA-5	BA Isolation Valve	H	X				A				RF	42
2BA-33	BA Isolation Valve	H	X				A				RF	42
PO-144A												
2CC-7	CC from RCP	P	X	X			A		X	45	F	S/D 43
2CC-8	CC from RCP	P	X	X			A			18	F	S/D 44
2CC-20	CC to RCP	C	X		X		A/C				F	RF 45
2CC-24	CC to RCP	C	X		X		A/C				F	RF 45
2CC-76	CC to CRD Service Structure	C	X		X		A/C				F	RF 45
2CC-77	CC to CRD Service Structure	C	X		X		A/C				F	RF 45

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS (SEC)	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
0-1472													
21A-90	Inst. Air to RD	H	X				A					RF	46
21A-91	Inst. Air to RB	H	X				A					RF	46
21RT-24	Leak Rate Test	H	X	X			A			F		3YR	47
21RT-25	Leak Rate Test	H	X	X			A			F		3YR	47
21RT-38	Leak Rate Test	H	X	X			A			F		3YR	48
21RT-39	Leak Rate Test	H	X	X			A			F		3YR	48

TABLE 3-3

OCONEE UNIT 3

VALVE TESTING PROGRAM

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	PARTIAL OR FULL STROKE STROKE TIME LIMITS	FREQUENCY	COMMENTS
PD-100A-3												
3RC-67	Pressurizer Relief	R			X		C					
3RC-68	Pressurizer Relief	R			X		C					
3LP-45	Auxiliary Spray	M	X				A					
3LP-46	Auxiliary Spray Check Valve	C	X				A/C					
PD-101A-3												
3HP-16	Makeup to LDST	P		X			B			5 F	3HO	
3HP-24	A HPI Pump Suc. From BWST	P		X			B			14 F	3HO	
3HP-25	C HPI Pump Suc. From BWST	P		X			B			14 F	3HO	
3HP-101	A HPI Suct. Check Vlv.	C		X		X	C			F	RF	1
3HP-102	C HPI Suct. Check Vlv.	C		X		X	C			F	RF	1
3HP-105	A HPI Disch. Chk. Vlv.	C		X		X	C			F	RF	2
3HP-109	B HPI Disch. Chk. Vlv.	C		X		X	C			F	RF	2
3HP-113	C HPI Disch. Chk. Vlv.	C		X		X	C			F	RF	2
3CA-73	CDAST to LDST	C				X	C			F	3HO	
3CA-85	BAHT to LDST	C				X	C			F	3HO	
PD-101B-3												
3HP-3	A LD Cooler Outlet	P	X	X			A		X	30 F	3HO	
3HP-4	B LD Cooler Outlet	P	X	X			A		X	30 F	3HO	
3HP-5	LD Cooler Isolation	P	X	X			A			4 F	SD	4
3HP-20	RC Pump Seal Return	P	X	X			A		X	30 F	SD	5
3HP-21	RC Pump Seal Return	P	X	X			A			14 F	SD	6

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REVEALING	STROKE TIME LIMITS	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
3HP-26	A Loop Injection	P	X	X			A			14	F	3HO	7
3HP-27	A Loop Injection	P	X	X			A			14	F	3HO	
3HP-120	RC Volumn Control	P	X	X			A				F	SD	
3HP-126	A Loop Check Valve	C	X			X	A/C				F/P	SD	8
3HP-127	A Loop Check Valve	C	X			X	A/C				F/P	SD	8
3HP-152	B Loop Check Valve	C	X			X	A/C				F	RF	9
3HP-153	B Loop Check Valve	C	X			X	A/C				F	RF	9
3HP-188	R Loop Check Valve	C				X	C				F	RF	10
3HP-194	A Loop Check Valve	C				X	C				F/P	SD	11

PO-102A-3

3CF-1	A CFT Isol. Vlv.	P					E	X					
3CF-2	B CFT Isol. Vlv.	P					E	X					
3CF-3	A CFT Sample Drain	P	X				A					RF	12
3CF-4	B CFT Sample Drain	P	X				A					RF	12
3CF-5	A CFT Vent	P					E	X					
3CF-6	B CFT Vent	P					E	X					
3CF-7	CFT to HWHUT	H	X				A	X				RF	12
3CF-11	A CFT Disch. Check Vlv.	C	X	X		X	A/C				P	SD	13
3CF-12	A CFT Disch. Check Vlv.	C	X			X	A/C				P	SD	13
3CF-13	B CFT Disch. Check Vlv.	C	X	X		X	A/C				P	SD	13
3CF-14	B CFT Disch Check Vlv.	C	X			X	A/C				P	SD	13

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED INDICATION AT REPELING POSITION	PARTIAL OR FULL STROKE STROKE TIME LIMITS	FREQUENCY	COMMENTS
3CF-19	CFT to Sample Sink	H	X				A			RF	12
3CF-33	CFT Vent to Vent HDR	H		X			A			RF	14
3CF-35	CFT Vent to Vlv. Filter	H		X			A			RF	15
3CF-36	CFT Vent to Vent HDR.	H		X			A			RF	15
3LP-1	DH Isolation Valve	P	X	X			A	X	55 F	SD	16
3LP-2	DH RB Isol. Vlv.	P	X	X			A	X	55 F	SD	16
3LP-3	DH RB Isol. Vlv.	P		X			B		85 F	3HO	
3LP-15	LPI A HDR to HPI	P		X			B		70 F	3HO	
3LP-16	LPI C HDR to HPI	P		X			B		70 F	3HO	
3LP-17	LPI A RB Isol. Vlv.	P		X			B		15 F	3HO	
3LP-18	LPI B RB Isol. Vlv.	P		X			B		15 F	3HO	
3LP-19	RB Emerg. Sump	P		X			B		66 F	3HO	
3LP-20	RB Emerg. Sump	P		X			B		70 F	3HO	
3LP-21	BWST to LPI Suct.	P		X			B		15 F	3HO	
3LP-22	BWST to LPI Suct.	P		X			B		15 F	3HO	
3LP-28	BWST Isolation	H					E	X			
3LP-29	BWST to A LPI HDR	C				X	C		F	HO	
3LP-30	BWST to B LPI HDR	C				X	C		F	HO	
3LP-31	A LPI Pump Disch	C				X	C		P/F	HO/SD	
3LP-33	A LPI Pump Disch	C				X	C		P/F	HO/SD	
3LP-47	A LPI HDR CK Vlv	C	X			X	A/C		F	SD	17
3LP-48	B LPI HDR CK Vlv	C	X			X	A/C		F	SD	17

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
3LP-106	Boron Dilution Vlv.	H		X			B				F	3HO	
3LP-107	Boron Dilution Vlv.	H		X			B				F	3HO	
ITEM DELETED													
ITEM DELETED													
3BS-5	A RBS Check	C				X	C				F	HO	20
3BS-6	B RBS Check	C				X	C				F	HO	20
3BS-7	A LPT HDR to RBS	C				X	C				P	RF	
3BS-9	B LPT HDR to RBS	C				X	C				P	RF	
3LP-103	Boron Dilution Vlv.	P		X			B		X	11.6	F	SD	18
3LP-104	Boron Dilution Vlv.	P		X			B		X	7.2	F	SD	18
PO-103A-3													
3BS-1	A RBS RD Isol. Vlv.	P		X			B			37.5	F	3HO	
3BS-2	B RBS RD Isol. Vlv.	P		X			B			37.5	F	3HO	
3BS-11	A RBS Disch. Check	C				X	C				P	HO	21
3BS-14	B RBS Disch. Check	C				X	C				F	5YR	22
3BS-16	B RBS Disch. Check	C				X	C				P	HO	21
3BS-19	B RBS Disch. Check	C				X	C				F	5YR	22
PO-104A-3													
3SF-60	Fuel Trans. Canal Fill	H	X				A					RF	23

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
3SF-61	Fuel Trans. Canal Fill	H	X				A					RF	23
PO-106A-3													
3CS-64	CBAST Outlet	P		X			B			10	F	3HO	
PO-106E-3													
3FW-64	Filtered Water to RB	H	X				A					RF	24
3FDW-65	Filtered Water to RB	H	X				A					RF	24
3DW-59	DW to RB	H	X				A					RF	24
3DW-60	DW to RB	H	X				A					RF	24
PO-107A-3													
3CS-5	QT RB Isol.	P	X	X			A		X	15	F	3HO	26
3CS-6	QT RB Isol.	P	X	X			A			55	F	3HO	
3CS-11	QT Recirc Check	C	X			X	A/C					RF	27
3CS-12	QT Recirc Check	C	X			X	A/C					RF	27
3GWD-12	QT Vent	P	X	X			A		X	15	F	3HO	26
3GWD-13	QT Vent	P	X	X			A			15	F	3HO	
PO-107B-3													
3LWD-1	Normal Sump Suction	P	X	X			A			15	F	3HO	28
3LWD-2	Normal Sump Suction	P	X	X			A			15	F	3HO	

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELLING	STROKE TIME LIMITS	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
3PR-10	RB Radiation Monitor	P	X	X			A			5	F	3HO	
PO-107D-3													
3LWD-97	RB Emerg. Sump Drain	H	X				A					RF	29
3LWD-103	RB Emerg. Sump Drain	H	X				A					RF	29
PO-121A-3													
3FDW-93	EFDW OTSG A	C				X	C				F	RF	31
3FDW-95	EFDW OTSG B	C				X	C				F	RF	31
PO-121B-3													
3FDW-101	EFDW to OTSG B	C				X	C				F	RF	31
3FDW-99	EFDW to OTSG A	C				X	C				F	RF	31
3FDW-33	EFDW to OTSG A	P		X			B			66	F	SD	32
3FDW-36	EFDW to OTSG A	P		X			B			48	F	SD	32
3FDW-38	EFDW to OTSG A	P		X			B			42	F	SD	33
3FDW-42	EFDW to OTSG B	P		X			B			60	F	SD	32
3FDW-45	EFDW to OTSG B	P		X			B			48	F	SD	32
3FDW-47	EFDW to OTSG B	P	X	X			A			45	F	SD	33
FDW-103	OTSG A Drain	P	X	X			A			25	F	SD	35
FDW-104	OTSG B Drain	P	X	X			A			25	F	SD	35
FDW-35	EFDW to OTSG A	P		X			B				F	SD	32

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
FDW-44	EFDW to OTSG B	P		X			B				F	SD	32
FDW-39	EFDW to OTSG A Check	C				X	C				F	RF	34
FDW-48	EFDW to OTSG B Check	C				X	C				F	RF	34
FDW-232	OTSG A Emerg. Hdr. Check	C				X	C				F	RF	34
FDW-233	OTSG B Emerg. Hdr. Check	C				X	C				F	RF	34
PO-122A-3													
3MS1-MS16	Main Steam Relief	R			X		C				F	3MO	
3MS-93	Emerg. FDWT St. Supp. Trip	P		X			B				F	3MO	
3MS-83	M.S. A to EFDW Turbine Ck.	C				X	C				F	3MO	
3MS-85	M.S. B to EFDW Turbine Ck.	C				X	C				F	3MO	
3MS-91	MS to EFDW Supply Ck.	C				X	C				F	3MO	
PO-122B-3													
3MS-102	MS Stop Valve 1	P	X	X			A			1	F	SD	36
3MS-103	MS Stop Valve 2	P	X	X			A			1	F	SD	36
3MS-104	MS Stop Valve 3	P	X	X			A			1	F	SD	36
3MS-105	MS Stop Valve 4	P	X	X			A			1	F	SD	36
PO-124C													
3LPSW-6	LPSW to RCP Oil Coolers	P	X	X			A			55	F	SD	37
3LPSW-7	RCP Motor Cooler Inlet	P	X	X			A	X		25	F	SD	

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE LIMITS	PARTIAL OR FULL STROKE	FREQUENCY	COMMENTS
3LPSW-8	RCP Motor Cooler Outlet	P	X	X			A		X	25	F	SD	
3LPSW-9	RCP Motor Cooler Inlet	P	X	X			A		X	25	F	SD	
3LPSW-10	RCP Motor Cooler Outlet	P	X	X			A		X	25	F	SD	
3LPSW-11	RCP Motor Cooler Inlet	P	X	X			A		X	25	F	SD	
3LPSW-12	RCP Motor Cooler Outlet	P	X	X			A		X	25	F	SD	
3LPSW-13	RCP Motor Cooler Inlet	P	X	X			A		X	25	F	SD	
3LPSW-14	RCP Motor Cooler Outlet	P	X	X			A		X	25	F	SD	
3LPSW-15	LPSW from RCP Oil Coolers	P	X	X			A			55	F	SD	37
3LPSW-18	LPSW from RBCU A	P		X			B			30	F	3HO	
3LPSW-21	LPSW from RBCU B	P		X			B			29	F	3HO	
3LPSW-24	LPSW from RBCU C	P		X			B			30	F	3HO	
3LPSW-4	LPSW DH Cooler Outlet	P		X			B			100	F	3HO	
3LPSW-5	LPSW DH Cooler Outlet	P		X			B			100	F	3HO	
3LPSW-75	LPSW DH Cooler Outlet	C				X	C				F	3HO	
3LPSW-76	LPSW DH Cooler Outlet	C				X	C				F	3HO	
3LPSW-404	LPSW DH Cooler Outlet	P		X			B			100	F	3HO	
3LPSW-405	LPSW DH Cooler Outlet	P		X			B			100	F	3HO	
3LPSW-108	RBCU Outlet	H					E	X					
PO-127B													
3N-106	N ₂ Isolation	H	X				A					RF	38
3N-107	N ₂ Isolation	H	X				A					RF	38

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REPERLING	FREQUENCY PARTIAL OR FULL STROKE STROKE TIME LIMITS	COMMENTS
3N-116	N ₂ Isolation	H	X				A			RF	38
3N-119	N ₂ Isolation	H	X				A			RF	38
3CA-27	N ₂ Isolation	H	X				A			RF	40
3CA-29	N ₂ Isolation	H	X				A			RF	40
3N-128	CFT A Supply	H	X				A			RF	39
3N-130	CFT B Supply	H	X				A			RF	39
HP-155	CFT A Fill	H	X				A			RF	41
HP-156	CFT B Fill	H	X				A			RF	41
PO-137											
3BA-5	BA Isol. Vlv.	H	X				A			RF	42
3BA-33	BA Isol. Vlv.	H	X				A			RF	42
PO-144A											
3CC-20	CC to RCP	C	X	X			A/C			F RF	45
3CC-24	CC to RCP	C	X	X			A/C			F RF	45
3CC-76	CC to CRD Service Str.	C	X	X			A/C			F RF	45
3CC-77	CC to CRD Service Str.	C	X	X			A/C			F RF	45
3CC-7	CC From RCP	P	X	X			A	X	45	F SD	43
3CC-8	CC from RCP	P	X	X			A		18	F SD	44
O-472											
3IA-90	Inst. Air to RB	H	X				A			RF	46

DRAWING NO. VALVE NO.	VALVE NAME	TYPE	LEAK TEST	EXERCISE TEST	SAFETY VALVE TEST	CHECK VALVE TEST	CATEGORY	LOCK OPEN/CLOSED	POSITION INDICATION AT REFUELING	STROKE TIME LIMITS	FREQUENCY	COMMENTS
31A-91	Inst. Air to RD	H	X				A				RF	46
0-472												
31RT-24	Leak Rate Test	H	X	X			A			F	3YR	47
31RT-25	Leak Rate Test	H	X	X			A			F	3YR	47
31RT-38	RV Isolation Valve	H	X	X			A			F	3YR	48
31RT-39	RV Isolation Valve	H	X	X			A			F	3YR	48

RELIEF REQUEST BASES

1. Valve(s): 1HP-101, -102
2HP-101, -102
3HP-101, -102

Category: C

Drawing Number/Coordinates: PO-101A-1/E-7, B-7
PO-101A-2/E-7, B-7
PO-101A-3/E-7, B-7

Function: Normally prevents backflow from HPI pump suction header to BWST. In emergency, opens to provide flow from BWST to HPI pumps.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power or at shutdown).

Bases for Relief: Monthly HPI pump tests utilize suction from the letdown storage tank. These valves are located in piping which contains highly borated water from the BWST. Exercising the valves would cause injection of highly borated water into the RCS, necessitating extensive cleanup. Late in core life, injecting BWST water (>1800 ppm boron) would cause a rapid power transient and consequent reactor trip. Testing at cold shutdown could prevent reactor start-up due to a relatively high boron concentration.

Alternate Testing: These valves will be full-stroke exercised during each refueling outage.

2. Valve(s): 1HP-105, -109, -113
2HP-105, -109, -113
3HP-105, -109, -113

Category: C

Drawing Number/Coordinates: PO-101A-1/G-4, E-4, B-4
PO-101A-2/G-4, E-4, B-4
PO-101A-3/G-4, E-4, B-4

Function: Discharge check valves for HPI pumps A, B and C.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power or at shutdown).

Bases for Relief: Cannot be full-stroke exercised during cold shutdown due to the insufficient volume of water available for the required flowrate. In addition, overpressurization of the RCS could occur.

Alternate Testing: These valves will be partial-stroke exercised monthly during pump testing, and full-stroke exercised during each refueling outage.

3. Valve(s): 2HP-3, -4

Category: A

Drawing Number/Coordinates: PO-101B-2/L-8, K-8

Function: Letdown coolers A and B outlet valves and penetration isolation valves.

Test Requirement: IWV-3420 Valve Leak Rate Test

Bases for Relief: Adequate test connections on the upstream (building) side of these valves do not exist. A station modification (NSM-0899) is being processed to add the necessary connections. When the modification is implemented, it will be possible to perform the leak rate tests in the direction specified by IWV-3420(c). The modifications have been completed for Units 1 and 3, so no relief is requested for those units.

Alternate Testing: Testing will be performed with pressure on the penetration side of the valves until the modification is completed.

4. Valve(s): 1HP-5
2HP-5
3HP-5

Category: A

Drawing Number/Coordinates: PO-101B-1/K-10
PO-101B-2/K-10
PO-101B-3/K-10

Function: Provides penetration isolation for the letdown coolers.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: Exercise of this valve at power operation would cause the loss of volume and chemistry control.

Alternate Testing: This valve will be full-stroke exercised during cold shutdowns.

5. Valve(s): 1HP-20
2HP-20
3HP-20

Category: A

Drawing Number/Coordinates: PO-101B-1/I-7
PO-101B-2/I-7
PO-202B-3/I-7

Function: Penetration isolation for the reactor coolant pump (RCP) seal return lines.

Test Requirement: IWV-3420 Valve Leak Rate Test

Bases for Relief: Piping on the seal side (upstream) of the valves does not contain adequate pressurization and test connections for testing in the direction specified by IWV-3420(C).

Alternate Testing: Pneumatic leak rate testing from the penetration side of the valves is being performed at each refueling outage.

6. Valve(s): 1HP-21
2HP-21
3HP-21

Category: A

Drawing Number/Coordinates: PO-101B-1/I-10
PO-101B-2/I-10
PO-101B-3/I-10

Function: Penetration isolation for the RCP seal return lines.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: These valves are containment isolation valves in a non-redundant flow path. Failure of the valves during testing could result in the loss of the RCP seal water return system. This could cause the loss of RCP seals and the release of reactor coolant into the Reactor Building. Damage to RCP seals would require a reactor shutdown.

Alternate Testing: These valves will be full-stroke exercised during cold shutdowns.

7. Valve(s): 1HP-26
2HP-26
3HP-26

Category: A

Drawing Number/Coordinates: PO-101B-1/G-10
PO-101B-2/G-10
PO-101B-3/G-10

Function: In an emergency, open for HPI pump A flow.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: Failure of the valves during exercise testing at power operation would result in the loss of primary pressurizer level control, and possibly a reactor trip.

Alternate Testing: These valves will be full-stroke exercised during cold shutdowns.

8. Valve(s): 1HP-126, -127
2HP-126, -127
3HP-126, -127

Category: A/C

Drawing Number/Coordinates: PO-101B-1/G-8, G-8
PO-101B-2/G-8, G-8
PO-101B-3/G-8, G-8

Function: RC Loop A (normal makeup) check valves to prevent backflow from the RCS.

Test Requirement: IWW-3520 Check Valve Exercise Test (at power or at shutdown).

Bases for Relief: These valves are inaccessible during power operation because they are located inside the secondary shielding in a high radiation area. Testing these valves and valves HP-152 and -153 would result in a dose to the operator of approximately 200 mrem. They cannot be full-stroke exercised during cold shutdowns due to the possibility of overpressurization.

Alternate Testing: These valves will be partial-stroke exercised during cold shutdowns and full-stroke exercised at each refueling outage.

9. Valve(s): 1HP-152, -153
2HP-152, -153
3HP-152, -153

Category: A/C

Drawing Number/Coordinates: PO-101B-1/B-8, B-8
PO-101B-2/B-8, B-8
PO-101B-3/B-8, B-8

Function: RC Loop B stop check valves to prevent backflow from the RCS.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power or at shutdown).

Bases for Relief: These valves cannot be exercised during power operation since they are inaccessible. They are located inside the secondary shield in a high radiation area, and testing these valves and valves HP-126 and -127 would result in a dose to the operator of approximately 200 mrem. In addition, exercising these valves at power or at cold shutdown would cause the generation of waste, and could delay startup due to the injection of borated water.

Alternate Testing: These valves will be full-stroke tested during each refueling outage.

10. Valve(s): 1HP-188
2HP-188
3HP-188

Category: C

Drawing Number/Coordinates: PO-101B-1/B-9
PO-101B-2/B-9
PO-101B-3/B-9

Function: HPI Loop B check valves to prevent backflow from the RCS.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power or at shutdown).

Bases for Relief: Exercising these valves would cause added waste generation. In addition, exercising them at power could cause a reactor trip and exercising them at cold shutdowns could delay startup due to the injection of borated water.

Alternate Testing: These valves will be full-stroke exercised during each refueling outage.

11. Valve(s): 1HP-194
2HP-194
3HP-194

Category: C

Drawing Number/Coordinates: PO-101B-1/G-9
PO-101B-2/G-9
PO-101B-3/G-9

Function: HPI Loop A check valves to prevent backflow from the RCS.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power or at shutdown).

Bases for Relief: These valves cannot be full-stroke exercised at power or at cold shutdown due to the possibility of over-pressurization.

Alternate Testing: These valves will be partial-stroke tested at cold shutdowns and full-stroke tested during each refueling outage.

12. Valves(s): 1CF-3, -4, -7, -19
2CF-3, -4, -7, -19
3CF-3, -4, -7, -19

Category: A

Drawing Number/Coordinates: PO-102A-1/J-2, J-5, J-6, J-6
PO-102A-2/J-2, J-5, J-6, J-6
PO-102A-3/J-2, J-5, J-6, J-6

Function: A & B Core Flood Tank sample and drain line isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test (at power or at shutdown)

Bases for Relief: These are normally closed passive valves which are required to be closed, and exercise testing should therefore be excluded per IWV-1300. Exemption from leak testing pursuant to 10CFR50, Appendix J, has been requested since adequate vent connections do not exist to properly test these valves. Sample and tell-tale connections are located too far downstream to adequately detect valve leakage. In addition, normal operating pressure for this system is well in excess of design maximum accident pressure.

Alternate Testing: None proposed.

13. Valve(s): 1CF-11, -12, -13, -14
2CF-11, -12, -13, -14
3CF-11, -12, -13, -14

Category: C

Drawing Number/Coordinates: PO-102A-1/H-2, H-2, H-4, H-4
PO-102A-2/H-2, H-2, H-4, H-4
PO-102A-3/H-2, H-2, H-4, H-4

Function: Normally prevent backflow from RCS to core flood tanks. In an emergency, open to permit flow from core flood tanks and/or LPI System.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power or at shutdown).

Bases for Relief: These valves cannot be subjected to greater than RCS pressure during power operation. They cannot be full-stroke exercised during cold shutdowns due to the possibility of overpressurization and hydraulic shock to the system. They cannot be full-stroke exercised during refueling outages due to the possibility of airborne and surface contamination resulting from surge spray, hydraulic shock to core internals and fuel, and extensive damage to the core flood tank isolation valves.

Alternate Testing: These valves will be partial-stroke testing during cold shutdowns.

14. Valve(s): 1CF-33
2CF-33
3CF-33

Category: A

Drawing Number/Coordinates: PO-102A-1/K-3
PO-102A-2/K-3
PO-102A-3/K-3

Function: Core flood tank to waste gas block valves.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. They cannot be leak rate tested during power operation, since adequate test connections on the upstream side of the valves do not exist.

Alternate Testing: The valves will be leak rate tested from the penetration side during refueling outages.

15. Valve(s): 1CF-35, -36
2CF-35, -36
3CF-35, -36

Category: A

Drawing Number/Coordinates: PO-102A-1/J-6, J-6
PO-102A-2/J-6, J-6
PO-102A-3/J-6, J-6

Function: Core flood tank vent to vent header penetration isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test

Bases for Relief: These are passive, manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. In addition, failure in the open position could result in loss of penetration isolation.

Alternate Testing: None proposed.

16. Valve(s): 1LP-1, -2
2LP-1, -2
3LP-1, -2

Category: B

Drawing Number/Coordinates: PO-102A-1/E-3, E-3
PO-102A-2/E-3, E-3
PO-102A-3/E-3, E-3

Function: Decay heat removal line isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: These are isolation valves in a non-redundant flow path, and they serve as the RCS pressure boundary. They cannot be exercise tested during power operation, since failure in the open position would decrease the degree of redundancy in the system pressure boundary. In addition, the LP-1 valves are interlocked to prevent opening while system pressure exceeds LPI system design pressure.

Alternate Testing: These valves will be full-stroke exercised at cold shutdowns.

17. Valve(s): 1LP-47, -48
2LP-47, -48
3LP-47, -48

Category: C

Drawing Number/Coordinates: PO-102A-1/G-1, G-4
PO-102A-2/G-1, G-4
PO-102A-3/G-1, G-4

Function: Loop A and Loop B header penetration isolation check valves.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power)

Bases for Relief: These valves cannot be exercised during power operation since the operating system pressure is greater than the LPI system pressure.

Alternate Testing: These valves will be full-stroke exercised during cold shutdowns.

18. Valve(s): 1LP-103, -104
2LP-103, -104
3LP-103, -104

Category: B

Drawing Number/Coordinates: PO-102A-1/E-1, D-1
PO-102A-2/E-1, D-1
PO-102A-3/E-1, D-1

Function: Post-LOCA boron dilution line isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: These are redundant isolation valves which serve as an RCS pressure boundary. Failure of one valve while the other is being exercised would result in a loss of RCS pressure boundary.

Alternate Testing: These valves will be full-stroke tested at cold shutdowns.

19. Valve(s): 1LP-105

Category: B

Drawing Number/Coordinates: PO-102A-1/C-4

Function: Alternate decay heat path isolation valve; permits decay heat mode operation during reactor coolant pump seal maintenance.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: Failure of this valve to close during power operation would prevent establishment of decay heat removal.

Alternate Testing: This valve will be full-stroke exercised during cold shutdowns.

20. Valve(s): 1BS-5, -6
2BS-5, -6
3BS-5, -6

Category: C

Drawing Number/Coordinates: PO-102A-1/E-9, D-14
PO-102A-2/E-9, D-14
PO-102A-3/E-9, D-14

Function: Loop A and Loop B BWST suction line check valves.

Test Requirement: IWV-3520 Check Valve Exercise Test

Bases for Relief: These valves cannot be full-stroke exercised because the present piping size and configuration prevent recirculation flow from equaling spray flow.

Alternate Testing: These valves will be partial-stroke tested every 3 months.

21. Valve(s): 1BS-11, -16
2BS-11, -16
3BS-11, -16

Category: C

Drawing Number/Coordinates: PO-103A-1/E-8, I-8
PO-103A-2/E-8, I-8
PO-103A-3/E-8, I-8

Function: Loop A and Loop B pump discharge check valves.

Test Requirement: IWV-3520 Check Valve Exercise Test

Bases for Relief: These valves cannot be full-stroke exercised because the present piping size and configuration prevent recirculation flow from equaling design spray flow.

Alternate Testing: These valves will be partial-stroke exercised every month.

22. Valve(s): 1BS-14, -19
2BS-14, -19
3BS-14, -19

Category: C

Drawing Number/Coordinates: PO-103A-1/E-4, I-4
PO-103A-2/E-4, I-4
PO-103A-3/E-4, I-4

Function: Open to allow RB spray flow to header.

Test Requirement: IWV-3520 Check Valve Exercise Test

Bases for Relief: Due to the configuration of these valves it is very difficult to verify air flow through the spray nozzles. Due to the redundancy with RB coolers and the two independent spray trains, and since these valves are not subjected to liquid or a corrosive atmosphere, frequent testing is not necessary.

Alternate Testing: These valves will be full-stroke tested every five years.

23. Valve(s): 1SF-60, -61
2SF-60, -61
3SF-60, -61

Category: A

Drawing Number/Coordinates: PO-104A-1/F-3, F-3
PO-104A-1/F-9, F-12
PO-104A-3/F-3, F-3

Function: Fuel transfer canal fill line penetration isolation.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test

Bases for Relief: These valves are manual passive, normally closed valves and do not require exercise testing. Exemption has been requested from leak testing pursuant to 10CFR50, Appendix J, since the piping which contains these valves lacks adequate test connections.

Alternate Testing: None proposed.

24. Valve(s): 1FW-64, -65, 1DW-59, -60
2FW-64, -65, 2DW-59, -60
3FW-64, -65, 3DW-59, -60

Category: A

Drawing Number/Coordinates: PO-106E-1/D-7, D-8, A-7, A-7
PO-106E-2/D-7, D-8, A-7, A-7
PO-106E-3/D-7, D-8, A-7, A-7

Function: Filtered Water and demineralized water lines building penetration isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test

Bases for Relief: These are manual passive normally closed valves and not required to be exercised per IWV-1300. In addition, exemption from leak rate testing, as required by 10CFR50 Appendix J, has been requested since adequate isolation and test connections do not exist to perform this testing.

Alternate Testing: None proposed.

25. Valve(s): 1DW-155, -156

Category: A/C

Drawing Number/Coordinates: PO-106E-1/B-7, C-9

Function: Reactor coolant pump demineralized water supply line penetration isolation check valves.

Test Requirement: IWW-3410 Valve Exercise Test and IWW-3520 Check Valve Exercise Test

Bases for Relief: This line supplies a small amount of demineralized water to rinse off borated water seepage through the RC pump seals preventing boron crystal buildup. No provisions exist to close these normally open check valves for testing. Any leakage through these check valves would be included in the Integrated Leak Rate Test performed per 10CFR50, Appendix J.

Alternate Testing: None proposed.

26. Valve(s): 1CS-5, 1GWD-12
2CS-5, 2GWD-12
3CS-5, 3GWD-12

Category: A

Drawing Number/Coordinates: PO-107A-1/D-7, J-7
PO-107A-2/D-7, J-7
PO-107A-3/D-7, J-7

Function: Reactor Building penetration isolation valves for quench tank drain and vent lines.

Test Requirement: IWV-3420 Valve Leak Rate Test

Bases for Relief: Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since the lines involved do not have adequate isolation, vent and/or test lines to perform the leak rate test from the upstream (building) side of the valves.

Alternate Testing: These valves are pneumatically leak tested in the reverse direction (i.e. from the penetration side) during refueling outage.

27. Valve(s): 1CS-11, -12
2CS-11, -12
3CS-11, -12

Category: A/C

Drawing Number/Coordinates: PO-107A-1/H-10, H-8
PO-107A-2/H-10, H-8
PO-107A-3/H-10, H-8

Function: Quench tank recirculation line penetration check valves.

Test Requirement: IWV-3410 Valve Leak Rate Test and IWV-3520 Check Valve Exercise Test

Bases for Relief: These check valves can be shown to open by normal periodic recirculation of the quench tank. However, their emergency function is to close on reversal of pressure, and this can only be shown by a leak rate test. Due to the extensive draining and venting of the line which is required and the consequent waste generation and radiation dose, leak rate testing can only be performed at refueling outages.

Alternate Testing: These valves are pneumatically tested during refueling outages.

28. Valve(s): 1LWD-2
2LWD-1
3LWD-1

Category: A

Drawing Number/Coordinates: PO-107B-1/D-4
PO-107B-1/D-13
PO-107B-3/D-4

Function: Normal sump drain line penetration isolation valves.

Test Requirement: IWV-3420 Valve Leak Rate Test

Bases for Relief: Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since the drain line does not have adequate isolation and/or test connections to perform the leak rate test from the building side.

Alternate Testing: The valves are pneumatically leak tested from the reverse direction during refueling outages.

29. Valve(s): 1LWD-99, -103
2LWD-99, -103
3LWD-99, -103

Category: A

Drawing Number/Coordinates: PO-107D-1/L-3, L-3
PO-107D-1/L-6, L-6
PO-107D-3/L-3, L-3

Function: Reactor building emergency sump to waste tank penetration
isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and
IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves and
not required to be exercise tested per IWV-1300.
Exemption from leak rate testing per 10CFR50, Appendix
J, has been requested since this line doesn't have
adequate isolation and test provisions to perform
leak rate testing.

Alternate Testing: None proposed.

30. Valve(s): 1PR-7, -9
2PR-7, -9
3PR-7, -9

Category: A

Drawing Number/Coordinates: PO-116A-1/F-3, F-4
PO-116A-2/F-3, F-4
PO-116A-3/F-3, F-4

Function: Reactor Building Radiation monitor inlet and return block
penetration isolation valves.

Test Requirement: IWV-3420 Valve Leak Rate Test

Bases for Relief: Adequate test connections on the upstream side of
these valves do not exist to satisfactorily perform
leak rate testing.

Alternate Testing: The valves will be leak rate tested in the reverse
direction.

31. Valve(s): 1FDW-93, -95, -99, -101
2FDW-93, -95, -99, -101
3FDW-93, -94, -99, -101

Category: C

Drawing Number/Coordinates: PO-121A-1/I-9, I-9, PO-121B-1/F-3, D-3
PO-121A-2/I-9, I-9, PO-121B-2/F-3, D-3
PO-121A-3/I-9, I-9, PO-121B-3/F-3, D-3

Function: These valves normally prevent backflow from the feedwater line to the emergency feedwater pump. In an emergency they open to allow flow from the emergency feedwater pump to the normal and emergency feedwater nozzles.

Test Requirement: IWV-3520 Check Valve Exercise Test

Bases for Relief: The emergency feedwater pump supplies unheated condensate to the steam generators. Therefore, exercising these valves at power would create undue thermal stresses on the steam generator tubes. In addition, the introduction of oxygen saturated water into the steam generators during a cold shutdown would delay startup.

Alternate Testing: These valves will be full-stroke exercised at refueling outages.

32. Valve(s): 1FDW-33, -35, -36, -42, -44, -45
2FDW-33, -35, -36, -42, -44, -45
3FDW-33, -35, -36, -42, -44, -45

Category: B

Drawing Number/Coordinates: PO-121B-1B/I-5, J-6, J-7, E-5, F-6, F-7
PO-121B-2B/I-5, J-6, J-7, E-5, F-6, F-7
PO-121B-3B/I-5, J-6, J-7, E-5, F-6, F-7

Function: Steam generator startup block, startup control, and normal
startup header valves.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: These valves are normally open to allow feedwater
flow to continue through the startup line. Closing
one of the valves would result in a feedwater flowrate
transient which could cause a reactor trip.

Alternate Testing: These valves will be full-stroke exercised at cold
shutdowns.

33. Valve(s): 1FDW-38, -47
2FDW-38, -47
3FDW-38, -47

Category: B

Drawing Number/Coordinates: PO-121B-1B/K-7, G-7
PO-121B-2B/K-7, G-7
PO-121B-3B/K-7, G-7

Function: Emergency feedwater header block valves.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: These valves cannot be exercised during power operation because they are not designed to close against system pressure.

Alternate Testing: These valves will be full-stroke exercised during cold shutdowns.

34. Valve(s): 1FDW-39, -48, -232, -233
2FDW-39, -48, -232, -233
3FDW-39, -48, -232, -233

Category: C

Drawing Number/Coordinates: PO-121B-1B/K-7, G-7, K-10, G-10
PO-121B-2B/K-7, G-7, K-10, G-10
PO-121B-3B/K-7, G-7, K-10, G-10

Function: Steam generator emergency header check valves.

Test Requirement: IWV-3520 Check Valve Exercise Test (at power)

Bases for Relief: These valves cannot be exercised during power operation because they are not designed to close against system pressure.

Alternate Testing: These valves will be full-stroke exercised during cold shutdowns.

35. Valve(s): 1FDW-103, -104
2FDW-103, -104
3FDW-103, -104

Category: A

Drawing Number/Coordinates: PO-121B-1B/E-14, 0-13
PO-121B-2B/E-14, 0-13
PO-121B-3B/E-14, 0-13

Function: Steam generator drain line penetration isolation valves.

Test Requirement: IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive, normally closed valves which are not required to open in an emergency, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

36. Valve(s): 1MS-102, -103, -104, -105
2MS-102, -103, -104, -105
3MS-102, -103, -104, -105

Category: B

Drawing Number/Coordinates: PO-122B-1/K-3, K-3, K-3, K-3
PO-122B-2/K-3, K-3, K-3, K-3
PO-122B-3/K-3, K-3, K-3, K-3

Function: Turbine stop valves.

Test Requirement: IWV-3410 Valve Exercise Test (at power)

Bases for Relief: Exercising these valves at full power results in a water hammer effect which is considered to be a possible cause of steam generator tube leaks.

Alternate Testing: These valves are exercised annually at reduced power. In addition, a fast channel trip test is performed at each cold shutdown.

37. Valve(s): 1LPSW-6, -15
2LPSW-6, -15
3LPSW-6, -15

Category: A

Drawing Number/Coordinates: PO-124B/F-5, J-1
PO-124B/F-10, J-14
PO-124B/L-10, K-7

Function: Reactor coolant pump motor and motor bearing cooler isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test

Bases for Relief: These valves isolate flow to and from reactor coolant pump motor coolers. Failure of either valve during power operation would result in overheating of and consequent damage to the reactor coolant pumps.

Alternate Testing: These valves will be full-stroke exercised during cold shutdowns.

38. Valve(s): 1N-106, -107, -116, -119
2N-106, -107, -116, -119
3N-106, -107, -116, -119

Category: A

Drawing Number/Coordinates: PO-127B/E-4, E-4, D-3, D-5
PO-127B/D-8, E-9, D-7, D-8
PO-127B/D-12, E-13, D-11, D-12

Function: Nitrogen blanketing header isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

39. Valve(s): 1N-128, -130
2N-128, -130
3N-128, -130

Category: A

Drawing Number/Coordinates: PO-127B/B-5, C-5
PO-127B/B-9, C-9
PO-127B/B-13, C-13

Function: Core flood tank supply isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and
IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

40. Valve(s): 1CA-27, -29
2CA-27, -29
3CA-27, -29

Category: A

Drawing Number/Coordinates: PO-127B/B-5, C-5
PO-127B/P-9, C-9
PO-127B/B-13, C-13

Function: Fill and make up from chemical addition system to core flood tanks.

Test Requirement: IWV-3410 Valve Exercise Test and
IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

41. Valve(s): 1HP-155, -156
2HP-155, -156
3HP-155, -156

Category: A

Drawing Number/Coordinates: PO-127B/B-5, C-6
PO-127B/B-9, C-9
PO-127B/B-13, C-13

Function: Core flood tank fill line isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and
IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

42. Valve(s): 1BA-5, -33
2BA-5, -33
3BA-5, -33

Category: A

Drawing Number/Coordinates: PO-137/D-5, D-5
PO-137/D-6, D-6
PO-137/D-10, D-10

Function: Breathing air line isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and
IWV-3420 Valve Exercise Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

43. Valve(s): 1CC-7
2CC-7
3CC-7

Category: A

Drawing Number/Coordinates: PO-144A-1/G-7
PO-144A-2/G-7
PO-144A-3/G-7

Function: Component cooling system return line penetration isolation.

Test Requirement: IWW-3410 Valve Exercise Test and IWW-3420 Valve Leak Rate Test (at power)

Bases for Relief: Exercising this valve during power operation would remove cooling water to the reactor coolant pumps, resulting in damage to thermal barriers and pump seal failure. In addition, isolation of letdown flow could cause the loss of pressurizer level control and loss of cooling water to the control rod drive mechanism. Adequate isolation and test connections do not exist on the upstream side of the valve for leak rate testing.

Alternate Testing: The valve will be full-stroke exercised at cold shutdowns. The leak rate test will be performed from the penetration side during refueling outages.

44. Valve(s): 1CC-8
2CC-8
3CC-8

Category: A

Drawing Number/Coordinates: PO-144A-1/G-7
PO-144A-2/G-7
PO-144A-3/G-7

Function: Component cooling system return line penetration isolation.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test (at power).

Bases for Relief: Exercising this valve during power operation would remove cooling water to the reactor coolant pumps, resulting in damage to thermal barriers and pump seal failure. In addition, isolation of letdown flow could cause the loss of pressurizer level control and loss of cooling water to the control rod drive mechanism.

Alternate Testing: The valve will be full-stroke exercised and leak rate tested at cold shutdowns.

45. Valve(s): 1CC-20, -24, -76, -77
2CC-20, -24, -76, -77
3CC-20, -24, -76, -77

Category: A/C

Drawing Number/Coordinates: PO-144A-1/L-5, L-8, J-8, J-6
PO-144A-2/L-5, L-8, J-8, J-6
PO-144A-3/L-5, L-8, J-8, J-6

Function: Component cooling lines to RC pumps, letdown coolers, and control rod drive service structure penetration isolation valves.

Test Requirement: IWV-3420 Valve Leak Rate Test and
IWV-3520 Check Valve Exercise Test

Bases for Relief: Testing these valves at power would isolate cooling from respective components. Testing at each cold shutdown would result in extensive waste generation. In order to demonstrate closure of these normally open valves, leak rate testing must be performed and this is done at refueling outages.

Alternate Testing: The valves will be exercise and leak rate tested during refueling outages.

46. Valve(s): 1IA-90, -91
2IA-90, -91
3IA-90, -91

Category: A

Drawing Number/Coordinates: O-472/E-9, E-8
O-1472/E-9, E-8
O-2472/E-9, E-8

Function: Instrument air supply line penetration isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test.

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

47. Valve(s): 1LRT-24, -25
2LRT-24, -25
3LRT-24, -25

Category: A

Drawing Number/Coordinates: O-472/E-9, E-9
O-1472/E-9, E-9
O-2472/E-9, E-9

Function: Leak rate test instrumentation line penetration isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing per IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.

48. Valve(s): 1LRT-38, -39
2LRT-38, -39
3LRT-38, -39

Category: A

Drawing Number/Coordinates: O-472/E-9, E-8
O-1472/E-9, E-8
O-2472/E-9, E-8

Function: Reference vessel penetration isolation valves.

Test Requirement: IWV-3410 Valve Exercise Test and
IWV-3420 Valve Leak Rate Test

Bases for Relief: These are passive manual, normally closed valves, and are therefore excluded from exercise testing for IWV-1300. Exemption from leak rate testing per 10CFR50, Appendix J, has been requested since adequate isolation and test connections do not exist to perform such testing.

Alternate Testing: None proposed.