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INSERVICE TESTING PROGRAM MANUAL TABLE OF CONTENTS

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1.0 INSERVICE TESTING PROGRAM

NOTE: Technical Specification 4.0.4 requires performance of this Inservice Testing program. This document then becomes an extension of the Technical Specification and failure to meet the requirements of this program is a violation of Tech. Specs.

1.1 Applicable ASME Code and Addenda:

1986 Edition

1.2 Program Period:

120 month period beginning July 1, 1992

1.3 Program scope:

As required by 10 CFR 50.55a(g), this document defines the Inservice Testing program at Oconee Nuclear Station. Included in this program are all pumps and valves that are within the scope of ASME Sections XI, Subsections IWP and IWV.

Pumps and valves are classified in accordance with 10 CFR 50.55a and NRC Regulatory Guide 1.26 as ISI Class A, B, or C, which corresponds to ASME Class 1, 2, or 3 respectively. The following defines the criteria for inclusion of equipment in the IST Program:

- a) All Category A valves that fall within the Duke ISI Class A, B, or C boundaries.
- b) All Category B and C valves that fall within the Duke ISI Class A, B, or C boundaries and are active in the mitigation of Design Basis Accidents (Design Basis Accident is defined as those described in FSAR Chapter 15)
- c) All pumps which fall within the Duke ISI Class A, B, or C boundaries that are provided with an emergency power source and are also active in mitigating the consequences of a FSAR Chapter 15 Design Basis Accident.
- d) Pumps and valves in systems specifically required by Technical Specifications to be tested per ASME Section XI.

1.4 IST Program guidelines and definitions.

- a) Inservice Testing performed at Cold Shutdown shall:
 - 1) Be performed during each cold shutdown when the planned length is of sufficient duration to establish the necessary test conditions and to perform the test, and
 - 2) Be performed as to not impact the timely completion of the shutdown related activities and subsequent return to operation. For outages when the planned length is not of sufficient duration to complete all tests, testing will start within 48 hours of reaching cold shutdown conditions.

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

b) Definitions:

- 1) Double frequency - 67 days maximum
- 2) Quarterly (3 months) - 135 days maximum
- 3) Cold Shutdown (CSD) - Unit below 200 °F and 300 psi. No testing is required if it has been less than 90 days since the last test was performed.
- 4) Refueling (RF) - Unit at CSD for the purpose of replacing or rearranging all or a portion of the fuel assemblies or control rods.

NOTE: The unit shall not be taken off line for the purpose of routine testing.

c) Program updates will be done as deemed appropriate by responsible System Engineers.

PUMP TESTING PROGRAM

**OCONEE NUCLEAR STATION
INSERVICE TESTING PROGRAM**

PUMP	F R E Q	U S N T I A T T	I P N R L E S T S	D P E R L E T S A S	F L O W	V I B	O L I V L L	B T E E A M R P	S S H P A E F E D
HIGH PRESS. INJECTION	QTR	PWR/HS	(1)	(7)	(7)	(8)	X	(9)	N/A
LOW PRESS. INJECTION	QTR	(3)	(1)	(7)	(7)	(8)	X	(9)	N/A
REACTOR BUILDING SPRAY	QTR	PWR/HS	X	(7)	(7)	(8)	X	(9)	N/A
LOW PRESS. SERVICE WATER	QTR	N/A	(1)	(7)	(7)	(8)	X	(9)	N/A
TURBINE DRIVEN EMERG. FDW	QTR	N/A	X	(7)	(7)	(8)	X	(9)	X
MOTOR DRIVEN EMERG. FDW	QTR	N/A	X	(7)	(7)	(8)	X	(9)	N/A
CONCENTRATED BORIC ACID	QTR	N/A	(1)(4)	(7)(2)	(5)	(8)	(6)	(9)	N/A
RC BLEED TRANSFER	QTR	N/A	(1)(4)	(7)	(5)	(8)	N/A	(9)	N/A
SSF RC MAKE-UP	QTR	N/A	X	(7)(2)	(7)	(10)	X	(9)	N/A
SSF AUXILIARY SERVICE WATER	QTR	N/A	X	(7)	(7)	(8)	X	(9)	N/A
SSF FUEL TRANSFER	QTR	N/A	X	(7)	(7)	(8)	N/A	(9)	N/A
SSF DIESEL ENGINE SERVICE WATER	QTR	N/A	X	(7)	(7)	(8)	X	(9)	N/A
SSF HVAC SERVICE WATER	QTR	N/A	(1)	(7)	(7)	(8)	X	(9)	N/A

**X - PARAMETERS TO BE MONITORED
(NUMBER) - REFERS TO NOTES ON ATTACHED PAGES**

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 routine 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 alternated 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-3100 (Table IWP-3100-1) requires differential pressure to be measured for all IWP pumps, centrifugal and positive displacement.
- (b) Reason: For these positive displacement pumps, suction pressure is independent of discharge pressure. Therefore, using differential pressure as the acceptance criteria could mask a degraded pump or indicate degradation on a good pump.
- (c) Proposed testing: For positive displacement pumps, where suction pressure is independent of discharge pressure, acceptance criteria will be applied to the discharge pressure measurement.
3. (a) Requirement: IWP-4110 (Table IWP-4110-1), IWP-4120; flow rate acceptable instrument accuracy of $\pm 2\%$ of full scale; full-scale range of each instrument shall be three times the reference value or less.
- (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 cross section of pipe. This restricts flow to a range from 1150 to 1550 gpm. At this low flow, the installed flow instrumentation lacks the required accuracy and range requirements.

- (c) Proposed Testing: During normal operation the "A" LPI pumps will be tested in recirculation mode at a reduced flow. During cold shutdowns (or quarterly in the event of frequent shutdowns) the "A" pump will be tested at a higher flow such that IWP-4110 and IWP-4120 can be met.
4. (a) Requirement: IWP-3300 (Table IWP-3100-1), IWP-4230 (Table IWP-4110-1) Suction pressure measurement for Concentrated Boric Acid Pumps and RC Bleed Transfer 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 Concentrated Boric Acid pump, Concentrated Boric Acid mix tank level will be used. For the RC Bleed Transfer pump, it will be calculated using the appropriate Bleed Hold Up tank level.
5. (a) Requirement: IWP-3300 (Table IWP-3100-1), IWP-4600 (Table IWP-4110-1) Flow for Concentrated Boric Acid pump and RC Bleed Transfer 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.
6. (a) Requirement: 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.
7. (a) Requirement: IWP-3300 (Table IWP-3100-1), Pressure Drop (ΔP) and Flow Rate (Q) for all pumps tested with adequate instrumentation.
- (b) Reason: The high limits allowed in Table IWP-3100-2 are more restrictive than the instrument calibration limits.

- (c) Range for ΔP will, at our discretion, be as follows: 0.93 to 1.07 $\Delta P(\text{Ref.})$ for acceptable range; 0.90 to 0.93 $\Delta P(\text{Ref.})$ for Low Alert, and 1.07 to 1.10 $\Delta P(\text{Ref.})$ for High Alert; $< 0.90 \Delta P(\text{Ref.})$ for Low Required Action, and $> 1.10 \Delta P(\text{Ref.})$ for High Required Action.

Range for Q will, at our discretion, be as follows: 0.94 to 1.06 $Q(\text{Ref.})$ for acceptable range; 0.90 to 0.94 $Q(\text{Ref.})$ for Low Alert, and 1.06 to 1.10 $Q(\text{Ref.})$ for High Alert; $< 0.90 Q(\text{Ref.})$ for Low Required Action, and $> 1.10 Q(\text{Ref.})$ for High Required Action.

8. (a) Requirements: IWP-4110 requires the accuracy of vibration amplitude measurements to be $\pm 5\%$ of full scale and IWP-4120 requires the full-scale range of vibration instrumentation to be three times the reference value or less.
- (b) Reason: Experience has shown that measuring vibration as required by IWP is not the most effective way to determine the mechanical condition of a pump. In order to better determine the mechanical condition of pumps, multiple vibration displacement measurements will be obtained/evaluated and supplemented with velocity measurements. Also, spectral analysis will be used to evaluate vibration data when necessary. In order to facilitate this testing, digital vibration instrumentation will be used.

IWP does not provide adequate guidance or requirements for performing enhanced vibration monitoring, nor does it provide the ability to use state-of-the-art digital vibration instrumentation that is required for enhanced monitoring.

- (c) Proposed Testing: In lieu of the vibration instrument accuracy requirements of IWP-4110, the loop accuracy of vibration instruments will be +/- 6.56% of reading for velocity and +/- 7.37% of reading for displacement. This accuracy is the best that can be reasonably obtained from state-of-the-art instrumentation that must be used to perform the enhanced testing. (The requirements of IWP allow vibration inaccuracies of greater than +/- 15% of reading.)

In lieu of the range requirements imposed on vibration instrumentation by IWP-4120, there will be no vibration instrumentation range requirement (digital vibration instrumentation is auto-ranging). It is not necessary to have a range requirement because the accuracy stated above and the readability of a digital gauge are not dependent upon instrument range.

In addition to vibration requirements of IWP-4510 which state that at least one peak-to-peak displacement amplitude be measured, peak-to-peak displacement and peak velocity will be measured at multiple points as defined per the test procedure. Multiple point measurements provide enhanced evaluation of overall machine condition. Acceptance criteria will be based on displacement as defined in Table IWP-3100-2. Although velocity vibration data will not have any acceptance criteria, the Accountable Systems Engineer will review the data during the final procedure review. For high speed pumps, vibration velocity provides a better indication of machine mechanical condition.

9. (a) Requirements: IWP-3500 subsection (b) states that when bearing temperatures are required, the quantities specified in Table IWP-3100-1 shall be measured or observed and recorded following bearing temperature stabilization.
- (b) Reason: In IWP-3500 subsection (a), the quantities specified in Table IWP-3100-1 are measured after at least 5 minutes operation under conditions as stable as the system permits. Past test results indicate that a 5 minute run time is adequate, if hydraulic conditions of the system do not change throughout the test, for the stabilization of the quantities in Table IWP-3100-1, with the exception of bearing temperatures. Therefore, with the exception of bearing temperatures, the same test results are achieved when recording the quantities after 5 minutes or after bearing temperatures have stabilized. Recording the quantities following bearing temperature stabilization will lengthen the test and can result in increased radiation exposure to test personnel.
- (c) Proposed testing: The quantities specified in Table IWP-3100-1, with the exception of bearing temperatures, will be taken after at least 5 minutes under conditions as stable as the system permits as stated in section IWP-3500(a) irrelevant of whether bearing temperatures are being recorded. Bearing temperatures will be taken after stabilization as defined in IWP-3500(b).

10. (a) Requirements: IWP-4110 requires the accuracy of vibration amplitude measurements to be $\pm 5\%$ of full scale and IWP-4120 requires the full-scale range of vibration instrumentation to be three times the reference value or less.
- (b) Reason: The SSF RC Makeup Pumps are located in each Unit's reactor building and, thus, inaccessible for local pump vibration monitoring during quarterly pump testing. An IRD vibration monitor panel is installed in the SSF control room with velometers on the pumps in the horizontal and vertical directions. The velometers that are installed have an accuracy of $\pm 10\%$. The interface panel is equipped with a 0-15 mil gauge that provides an overall vibration level. The baseline vibration for these pumps are typically 0.1 to 2 mils. To improve readability of the interface panel, the signal is being output to a CSI 2110 Digital Vibration Analyzer which has autoranging capability. The CSI 2110 Digital Vibration Analyzer also provides the ability to perform spectral analysis to aid in the determination of the cause of vibrations. The analyzer has an accuracy of $\pm 3\%$ and an integration error of $\pm 3\%$. The combined loop accuracy for the vibration monitoring system used is $\pm 10.86\%$ (root sum of the squares methodology) of reading. A station modification request has been issued to upgrade the existing instrumentation to improve the accuracy.
- (c) Proposed Testing: Continue to perform test as noted above until plant instrumentation is upgraded.

VALVE TESTING PROGRAM

VALVE TESTING PROGRAM NOTES
AND GENERIC REQUESTS

3.1 Valve Specific Guidelines

- a) Leak testing of containment isolation valves will be performed in accordance with 10 CFR 50 Appendix J. Valves tested in the reverse direction are indicated by "Rev. Dir. Leak Test" in the Remarks Section of the IWV Valve Table.
- b) Valve stroke times will be recorded to the nearest second, except for valves which have stroke times of less than one second. For these valves, a time of one second will be recorded.
- c) Stopwatches used to measure stroke times will be calibrated on an annual frequency.

3.2 Generic Requests for Relief

a. All Category A Valves

Test Requirement: IWV-3427 Valve Leak Rate Test, Section (b).

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.

Twenty-eight valves were chosen at random for leak rate trending. Three of these tests involved valves which were six inch diameter or larger.

Of the twenty-eight, fifteen had a single test decrease from the previous test; three had two consecutive leak rates which decreased from the previous test; three had three consecutive leak rates which either remained the same or decreased from the previous test. These valves had no maintenance performed on them during this period.

Of the twenty-eight, one failed after a previous decrease to less than 0.3% of allowed leak rate limit; two failed on the second test where the first test had a leak rate of less than 1.6% of allowed leak rate; three exhibited an increase in leak rate over the previous test for each test performed and failed on the last test. In neither case had the margin been reduced by more than 36.2% on any previous test prior to failure. One failed on the second test where the first test showed a leak rate of

greater than 64% of allowed leak rate limit.

In addition, performing maintenance on a valve is no guarantee the valve will have a lower leakage rate. On numerous occasions, valves had to have maintenance performed four or more times before the leak rate was measured to be significantly lower than the initial test which identified the problem. Replacing valves with new ones likewise does not guarantee an acceptable leak rate.

Alternate Testing: None proposed.

b. Fast Acting Valves

Test Requirement: IWV-3413 (b), IWV-3417

Bases for Relief: Power operated valves with stroke times of less than 2 seconds (i.e., "Fast Acting Valves") cannot show any recordable increase in stroke time without requiring corrective action, i.e. a valve stroking in 1.49 seconds (recorded as 1 sec.) could not increase to 1.51 seconds (recorded as 2 sec.) per IWV-3417(a). For such fast acting valves, errors introduced in timing contribute significantly to failure to meet acceptance criteria.

Alternate Testing: Specific valves with normal stroke times less than 2 second (primarily solenoid valves) will be defined and identified as "fast acting valves" and will be considered acceptable if the measured stroke time (rounded to the nearest second) remains at 2 seconds or less. Corrective action will be required when a "fast acting valve" stroke time is 3 seconds or greater.

c. Fail-Safe Valves

Test Requirement: IWV-3415: "When practical, valves with fail-safe actuators shall be tested by observing the operation of the valves upon loss of actuator power."

Basis for Relief: Testing by loss of actuator power is not practical. First, loss of actuator power generally involves maintenance action to interrupt power, which must subsequently be restored and verified. This greatly increases the manpower requirements for testing and increases possibility for human error in returning component to service. Second, by IWV-3200, a subsequent post-maintenance test is required to verify return to acceptable operation. Third, some components, especially pneumatic valves, have two modes of "loss of actuator

power": they can lose pneumatic power by loss of instrument air or they can lose electrical power to control solenoids. Therefore, to test all modes of failure at least three tests would be required on some valves.

The net result is a significant increase in manpower and time to perform the tests, an increase in radiation exposure for valves in radiation areas, and an increase in the possibility of improper return to service.

Alternate Testing: Fail safe valves will be tested using normal controls. Where both normal controls and engineered safeguard (ESG) control switches exist, the ESG switches will be used.

d. All Valves

Test Requirement: Corrective Action prior to startup. IWV-3417(b) "when corrective action is required as a result of tests made during cold shutdown, the condition shall be corrected before startup."

Basis for Relief: Existing Technical Specifications give limiting conditions for operation (LCO) including requirements for startup. If the failed component is not required to be operable in order to satisfy the appropriate LCO, there should be no additional startup penalty just due to above requirements.

Alternate Testing: None required. Components which are out of service shall not be required to be operable by IWV. Appropriate Tech. Spec. LCOs must be met, however.

e. Normally Closed Swing and Tilting Disc Valves:

Test Requirement: IWV-3522 (b) for Swing or Tilting Disk Valves, if the test is made by use of fluid flow through the valve, the pressure differential for equivalent flow shall be no greater than that observed during the preoperational test.

Basis for Relief: Preoperational Pressure Differential Data does not exist. Instrumentation taps to measure differential pressure would require numerous modifications, one or two pressure taps per valve. 10 CFR 50.55 does not require modifications of existing plants to meet code requirements.

Alternate Testing: Flow will be observed to insure disk movement without regard to valve differential pressure.

f. All Valves

Test Requirement: IWV-3412, IWV-3522 all valves which are stroke tested during cold shutdown are required to be exercised if 3 months have passed since last shutdown exercise.

Alternate Testing: When the unit is taken to cold shutdown for a short outage which will not allow for exercise testing of all valves; testing will start as soon as reasonably possible and in no case later than 48 hours after achieving cold shutdown. All valves which require special conditions during start-up will be tested. Any valve not tested due to time availability will be tested early during the next cold shutdown.

g. Containment Isolation Valves

Test Requirements: IWV-3200, all valves which are to be subsequently tested, following such maintenance which could affect its performance, prior to returning it to service.

Bases for Relief: Adjusting the packing of a valve which is leaking in order to minimize the leak will reduce the total Reactor Building leakage rate. Even though it would in most cases be acceptable by code standards to allow the valve to continue leaking, for ALARA and cost considerations it is more prudent to reduce any leak to minimum level. Exercising the valve will demonstrate its operability.

Alternate Testing: When valve packing is adjusted to reduce a leak the valve will be exercise (Partial or Full) tested prior to returning the valve to service. The leakage rate for type "C" valves will be determined by testing at the next refueling outage. Valve(s) which cannot be type "C" tested and are in penetrations which are challenged during a type "A" will be tested at the next scheduled type "A" test. No special type "A" will be performed.

h. Valves Required For Cold Shutdown

Test Requirements: IWV-1100, include valves which are required to perform a specific function in shutting down the reactor to the cold shutdown condition in the inservice testing program.

Basis for Relief: It is implicit within the Oconee licensing basis that operation of the LPI system in the normal decay heat removal mode and operation of other systems solely required to bring a Unit from hot shutdown to cold shutdown is not required to mitigate the consequences of a Design Basis Accident. Operability and detection of degradation affecting operation is assured each time the Unit is shutdown to the cold shutdown condition. In the event inoperability or degradation is discovered during shutdown to the cold shutdown condition the Design Basis of ONS is such that decay heat may be removed using other means for an extended period of time until repairs can be affected. Therefore, testing of these valves in accordance with IWV provides no commensurate increase in plant safety.

Alternate Testing: Valves which are required to perform a specific function in shutting down a reactor to the cold shutdown condition, but are not required to mitigate the consequences of a Design Basis Accidents, are tested in accordance with the ONS 10 CFR 50 Appendix B testing program.

i. Power-Operated Valves

Test Requirements: Compare power-operated valve stroke times to previous stroke times as required by IWV-3417(a).

Basis for Relief: As described in NRC Generic Letter No. 89-04, comparing stroke times to a reference value is an acceptable alternative to comparing with the previous stroke time. Comparing to a reference value will not allow stroke times to gradually increase without requiring corrective action.

Alternate Testing: Power-operated valve stroke times will be compared to reference stroke times. A reference stroke time will be established for each power-operated valve when it is known to be operating acceptably.

If the stroke time of a power-operated valve is not within the ranges specified below, its test frequency will be increased to once each month until corrective action is taken, at which time the original test frequency shall be resumed.

- For electric-motor-operated valves with a reference stroke time greater than 10 sec, the stroke time will be compared to a $\pm 15\%$ change from the reference stroke time.
- For other power-operated valves with a reference stroke time greater than 10 sec, the stroke time will be compared to a $\pm 25\%$ change from the reference value.
- For electric-motor-operated valves with a reference stroke time less than or equal to 10 sec, the stroke time will be compared to a $\pm 25\%$ or ± 1 sec change from the reference value, whichever is greater.
- For other power-operated valves with a reference stroke time less than or equal to 10 sec, the stroke time will be compared to a $\pm 50\%$ change from the reference value.

APPENDIX A

UNIT 1 VALVE TABLE

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
1AS-39	CK	OFD-122A-1.4	H6	C	23		
1BA-171	MAN	OFD-137A-1.2	H8	A			Passive, Rev. Dir. Leak Test
1BA-172	MAN	OFD-137A-1.2	H9	A			Passive, Rev. Dir. Leak Test
1BS-1	EMO	OFD-103A-1.1	J8	B			
1BS-2	EMO	OFD-103A-1.1	E8	B			
1BS-5	CK	OFD-102A-1.1	E8	C	11		
1BS-6	CK	OFD-102A-1.1	C10	C	11		
1BS-11	CK	OFD-103A-1.1	J6	C	12		
1BS-14	CK	OFD-103A-1.1	J10	C	13		
1BS-16	CK	OFD-103A-1.1	E6	C	12		
1BS-19	CK	OFD-103A-1.1	E10	C	13		
1C-176	AOV	OFD-121A-1.8	I7	B		36	
1C-187	AOV	OFD-121A-1.8	G7	B		36	
1C-192	AOV	OFD-121A-1.8	J7	B		36	
1C-391	EMO	OFD-121A-1.8	J11	B		20	
1C-572	CK	OFD-121A-1.8	E7	C		30	
1C-573	MAN	OFD-121A-1.8	E7	B		24	
1C-850	CK	OFD-121A-1.8	D4	C	22		
1C-852	CK	OFD-121A-1.8	C4	C	22		
1CA-27	MAN	OFD-127B-1.2	G7	A			Passive
1CA-29	MAN	OFD-127B-1.2	J7	A			Passive
1CC-7	EMO	OFD-144A-1.2	D13	A		38	Rev. Dir. Leak Test
1CC-8	PST	OFD-144A-1.2	D13	A		12	
1CC-20	CK	OFD-144A-1.2	D4	A/C	16		
1CC-24	CK	OFD-144A-1.2	D2	A/C	16		
1CC-76	CK	OFD-144A-1.3	H6	A/C	16		
1CC-77	CK	OFD-144A-1.3	H7	A/C	16		
1CCW-1	EMO	OFD-133A-1.2	I2	B			
1CCW-2	EMO	OFD-133A-1.2	I4	B			
1CCW-3	EMO	OFD-133A-1.2	I6	B			
1CCW-4	EMO	OFD-133A-1.2	I7	B			
1CCW-5	EMO	OFD-133A-1.2	I9	B			
1CCW-6	EMO	OFD-133A-1.2	I11	B			
CCW-8	EMO	OFD-133A-3.2	B1	B			
CCW-9	EMO	OFD-133A-3.2	D2	B			
1CCW-10	EMO	OFD-133A-1.1	J2	B			
1CCW-11	EMO	OFD-133A-1.1	J5	B			
1CCW-12	EMO	OFD-133A-1.1	J7	B			
1CCW-13	EMO	OFD-133A-1.1	J10	B			
1CCW-268-SSF	EMO	OFD-133A-2.5	I13	B			
1CCW-269-SSF	EMO	OFD-121D-1.1	G13	B		1	
CCW-271-SSF	CK	OFD-133A-2.5	I5	C			
CCW-274-SSF	CK	OFD-133A-2.5	J5	C			
CCW-284-SSF	CK	OFD-133A-2.5	H5	C			
CCW-286-SSF	MAN	OFD-133A-2.5	H8	B			
1CCW-287-SSF	EMO	OFD-133A-2.5	H13	B			

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
CCW-289-SSF	CK	OFD-133A-2.5	K8	C			
1CCW-304	CK	OFD-133A-1.2	J14	C			
CCW-382	MAN	OFD-133A-2.5	L4	B			
CCW-383	MAN	OFD-133A-2.5	J12	B			
CCW-384	MAN	OFD-133A-2.5	F10	B			
1CF-1	EMO	OFD-102A-1.3	F10	B		33	
1CF-2	EMO	OFD-102A-1.3	F6	B		33	
1CF-3	EMO	OFD-102A-1.3	G9	A			Passive
1CF-4	EMO	OFD-102A-1.3	G5	A			Passive
1CF-7	MAN	OFD-102A-1.3	G4	A			Passive
1CF-11	CK	OFD-102A-1.3	E10	A/C	10		
1CF-12	CK	OFD-102A-1.3	D9	A/C	17		
1CF-13	CK	OFD-102A-1.3	E6	A/C	10		
1CF-14	CK	OFD-102A-1.3	D7	A/C	17		
1CF-19	MAN	OFD-102A-1.3	G4	A			Passive
1CF-42	CK	OFD-127B-1.2	G11	A/C	25		
1CF-44	CK	OFD-127B-1.2	J11	A/C	25		
1CS-5	EMO	OFD-107A-1.2	D5	A			Rev. Dir. Leak Test
1CS-6	AOV	OFD-107A-1.2	D8	A			
1CS-11	CK	OFD-107A-1.1	J2	A/C	14		
1CS-12	CK	OFD-107A-1.1	J5	A/C	14		
1DW-59	MAN	OFD-106E-1.1	H2	A			Passive
1DW-60	MAN	OFD-106E-1.1	H3	A			Passive
1DW-155	CK	OFD-106E-1.1	E3	A/C	18		
1DW-156	CK	OFD-106E-1.1	E4	A/C	18		
1FDW-32	PST	OFD-121B-1.3	J7	B		23	
1FDW-33	EMO	OFD-121B-1.3	J6	B		10	
1FDW-35	AOV	OFD-121B-1.3	L7	B		10	
1FDW-39	CK	OFD-121D-1.1	J10	C	26		
1FDW-41	PST	OFD-121B-1.3	D7	B		23	
1FDW-42	EMO	OFD-121B-1.3	E6	B		10	
1FDW-44	AOV	OFD-121B-1.3	F7	B		10	
1FDW-103	EMO	OFD-121B-1.5	K8	A			Passive
1FDW-104	EMO	OFD-121B-1.5	C8	A			Passive
1FDW-105	EMO	OFD-110A-1.1	F3	A			
1FDW-106	PST	OFD-110A-1.1	F6	A			
1FDW-107	EMO	OFD-110A-1.1	D3	A			
1FDW-108	PST	OFD-110A-1.1	D6	A			
1FDW-232	CK	OFD-121D-1.1	K13	C	15		
1FDW-233	CK	OFD-121D-1.1	D13	C	15		
1FDW-311	CK	OFD-121D-1.1	J6	C	27		
1FDW-312	CK	OFD-121D-1.1	E6	C	27		
1FDW-315	AOV	OFD-121D-1.1	K10	B		29	
1FDW-316	PST	OFD-121D-1.1	D10	B		29	
1FDW-317	CK	OFD-121D-1.1	K10	C	1		
1FDW-318	CK	OFD-121D-1.1	D10	C	1		

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
1FDW-329	MAN	OFD-121B-1.5	J8	A			Passive
1FDW-331	MAN	OFD-121B-1.5	D8	A			Passive
1FDW-334	MAN	OFD-121B-1.5	L6	A			Passive
1FDW-335	MAN	OFD-121B-1.5	C6	A			Passive
1FDW-345	CK	OFD-121D-1.1	K12	C	31		
1FDW-346	CK	OFD-121D-1.1	D12	C	2		
1FDW-347-SSF	EMO	OFD-121D-1.1	D13	B		16	
1FDW-368	EMO	OFD-121D-1.1	J5	B			
1FDW-369	EMO	OFD-121D-1.1	E6	B			
1FDW-370	CK	OFD-121D-1.1	K3	C			
1FDW-372	EMO	OFD-121D-1.1	K7	B			
1FDW-373	CK	OFD-121D-1.1	K7	C	1		
1FDW-378	CK	OFD-121D-1.1	K3	C			
1FDW-380	CK	OFD-121D-1.1	D3	C			
1FDW-382	EMO	OFD-121D-1.1	D7	B			
1FDW-383	CK	OFD-121D-1.1	D7	C	1		
1FDW-388	CK	OFD-121D-1.1	D3	C			
1FDW-432	CK	OFD-121D-1.1	E10	C	26		
1FDW-442	CK	OFD-121D-1.1	D11	C	2		
FO-50	CK	OFD-135A-1.2	D7	C			
1FW-64	MAN	OFD-106E-1.1	J2	A			Passive
1FW-65	MAN	OFD-106E-1.1	J4	A			Passive, Rev. Dir. Leak Test
1GWD-12	EMO	OFD-107A-1.1	J11	A			Rev. Dir. Leak Test
1GWD-13	AOV	OFD-107A-1.1	K13	A			
1HP-3	EMO	OFD-101A-1.1	L5	A			
1HP-4	EMO	OFD-101A-1.1	J5	A			
1HP-5	PST	OFD-101A-1.1	K8	A		3	
1HP-20	EMO	OFD-101A-1.1	F5	A		35	Rev. Dir. Leak Test
1HP-21	PST	OFD-101A-1.1	E7	A		4	
1HP-24	EMO	OFD-101A-1.3	I3	B		28	
1HP-25	EMO	OFD-101A-1.3	F3	B		28	
1HP-26	EMO	OFD-101A-1.4	J7	B		5	
1HP-27	EMO	OFD-101A-1.4	D7	B			
1HP-78	CK	OFD-101A-1.2	F6	C			
1HP-97	CK	OFD-101A-1.2	D12	A/C	32		
1HP-101	CK	OFD-101A-1.3	J3	C	4		
1HP-102	CK	OFD-101A-1.3	E3	C	4		
1HP-105	CK	OFD-101A-1.3	J10	C	5		
1HP-109	CK	OFD-101A-1.3	G10	C	5		
1HP-113	CK	OFD-101A-1.3	D10	C	5		
1HP-126	CK	OFD-101A-1.4	J13	C	6		
1HP-127	CK	OFD-101A-1.4	J13	C	6		
1HP-144	CK	OFD-101A-1.4	G13	A/C	19		Rev. Dir. Leak Test
1HP-145	CK	OFD-101A-1.4	F13	A/C	19		Rev. Dir. Leak Test
1HP-146	CK	OFD-101A-1.4	H13	A/C	19		Rev. Dir. Leak Test
1HP-147	CK	OFD-101A-1.4	I12	A/C	19		

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
1HP-152	CK	OFD-101A-1.4	D14	C	7		
1HP-153	CK	OFD-101A-1.4	E13	C	7		
1HP-155	MAN	OFD-127B-1.2	H7	A			Passive
1HP-156	MAN	OFD-127B-1.2	I7	A			Passive
1HP-188	CK	OFD-101A-1.4	D11	C	8		
1HP-189	CK	OFD-101A-1.2	F6	C	33		
1HP-194	CK	OFD-101A-1.4	J10	C	9		
1HP-248	CK	OFD-101A-1.3	L10	C	34		
1HP-250	CK	OFD-101A-1.3	I9	C	34		
1HP-252	CK	OFD-101A-1.3	E9	C	34		
1HP-363	MAN	OFD-101A-1.2	F7	B		32	
1HP-364	CK	OFD-101A-1.2	F7	C	33		
1HP-390	CK	OFD-101A-1.4	F10	A/C	19		
1HP-393	CK	OFD-101A-1.4	I10	A/C	19		
1HP-398-SSF	EMO	OFD-101A-1.5	F11	B		14	
1HP-399-SSF	CK	OFD-101A-1.5	G13	C		2	
1HP-400-SSF	CK	OFD-101A-1.5	H13	C		2	
1HP-401-SSF	CK	OFD-101A-1.5	F13	C		2	
1HP-402-SSF	CK	OFD-101A-1.5	F13	C		2	
1HP-405-SSF	EMO	OFD-101A-1.5	H10	A			
1HP-409	EMO	OFD-101A-1.4	D7	B		27	
1HP-410	EMO	OFD-101A-1.4	H7	B		27	
1HP-417-SSF	EMO	OFD-101A-1.5	H9	A			
1HP-426-SSF	EMO	OFD-101A-1.5	J9	A		15	
1HP-428-SSF	EMO	OFD-101A-1.5	J13	A			
1HP-454	CK	OFD-101A-1.4	G10	A/C	19		
1HP-457	CK	OFD-101A-1.4	H10	A/C	19		
1HPSW-184	PST	OFD-124A-1.3	K10	B			
1HPSW-193	CK	OFD-124A-1.3	K11	C			
1IA-90	MAN	OFD-137B-1.2	D4	A			Passive
1IA-91	MAN	OFD-137B-1.2	C4	A			Passive
1LP-1	EMO	OFD-102A-1.1	H2	B		6	
1LP-2	EMO	OFD-102A-1.1	H2	B		6	
1LP-12	EMO	OFD-102A-1.2	K11	B			
1LP-14	EMO	OFD-102A-1.2	E11	B			
1LP-15	EMO	OFD-102A-1.2	L11	B			
1LP-16	EMO	OFD-102A-1.2	O-4	B			
1LP-17	EMO	OFD-102A-1.2	K13	B		13	
1LP-18	EMO	OFD-102A-1.2	E13	B		13	
1LP-19	EMO	OFD-102A-1.1	D5	B			
1LP-20	EMO	OFD-102A-1.1	D5	B			
1LP-21	EMO	OFD-102A-1.1	F7	B			
1LP-22	EMO	OFD-102A-1.1	D7	B			
1LP-28	MAN	OFD-102A-1.1	H10	B		31	
1LP-29	CK	OFD-102A-1.1	F6	C			
1LP-30	CK	OFD-102A-1.1	D6	C			

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
1LP-31	CK	OFD-102A-1.2	K5	C		22	
1LP-33	CK	OFD-102A-1.2	E6	C			
1LP-47	CK	OFD-102A-1.2	E14	A/C		7	
1LP-48	CK	OFD-102A-1.2	K14	A/C		7	
1LP-55	CK	OFD-101A-1.3	K3	C	21		
1LP-57	CK	OFD-101A-1.3	C3	C	21		
1LP-103	EMO	OFD-102A-1.1	H2	B		8	
1LP-104	EMO	OFD-102A-1.1	F2	B		8	
1LP-105	EMO	OFD-102A-1.1	H2	B		9	
1LPSW-4	EMO	OFD-124B-1.1	K6	B			
1LPSW-5	EMO	OFD-124B-1.1	H6	B			
1LPSW-6	EMO	OFD-124B-1.4	L2	B		17	
1LPSW-15	EMO	OFD-124B-1.4	G14	A		18	
1LPSW-18	EMO	OFD-124B-1.2	D3	B			
1LPSW-21	EMO	OFD-124B-1.2	D8	B			
1LPSW-24	EMO	OFD-124B-1.2	D12	B			
LPSW-25	CK	OFD-124A-1.1	D7	C			
LPSW-28	CK	OFD-124A-1.1	J7	C			
LPSW-31	CK	OFD-124A-1.1	G7	C			
1LPSW-75	CK	OFD-124B-1.1	K6	C			
1LPSW-76	CK	OFD-124B-1.1	H6	C			
1LPSW-138	PST	OFD-124A-1.3	L11	B			
1LPSW-139	EMO	OFD-124A-1.1	C8	B	29		
1LPSW-148	CK	OFD-124B-1.1	L4	C			
1LPSW-151	CK	OFD-124B-1.1	F3	C			
1LPSW-565	EMO	OFD-124B-1.2	J8	B			
1LPSW-566	EMO	OFD-124B-1.2	I8	B			
1LRT-17	AOV	OFD-137E-1.1	K10	A			Passive
1LRT-24	MAN	OFD-137E-1.1	I12	A			Passive
1LRT-25	MAN	OFD-137E-1.1	I12	A			Passive
1LRT-38	MAN	OFD-137E-1.1	J12	A			Passive
1LRT-39	MAN	OFD-137E-1.1	J13	A			Passive
1LWD-1	EMO	OFD-107B-1.1	C11	A			
1LWD-2	AOV	OFD-107B-1.1	C11	A			Rev. Dir. Leak Test
1LWD-99	MAN	OFD-107D-1.2	E9	A			Passive
1LWD-103	MAN	OFD-107D-1.2	E9	A			Passive
1MS-1	RV	OFD-122A-1.1	J9	C			
1MS-2	RV	OFD-122A-1.1	J4	C			
1MS-3	RV	OFD-122A-1.1	J7	C			
1MS-4	RV	OFD-122A-1.1	J5	C			
1MS-5	RV	OFD-122A-1.1	J8	C			
1MS-6	RV	OFD-122A-1.1	J5	C			
1MS-7	RV	OFD-122A-1.1	J7	C			
1MS-8	RV	OFD-122A-1.1	J6	C			
1MS-9	RV	OFD-122A-1.1	D9	C			
1MS-10	RV	OFD-122A-1.1	D4	C			

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
1MS-11	RV	OFD-122A-1.1	D7	C			
1MS-12	RV	OFD-122A-1.1	D5	C			
1MS-13	RV	OFD-122A-1.1	D8	C			
1MS-14	RV	OFD-122A-1.1	D5	C			
1MS-15	RV	OFD-122A-1.1	D7	C			
1MS-16	RV	OFD-122A-1.1	D6	C			
1MS-17	EMO	OFD-122A-1.2	I5	B		21	
1MS-24	EMO	OFD-122A-1.2	H3	B			
1MS-26	EMO	OFD-122A-1.2	D5	B		21	
1MS-33	EMO	OFD-122A-1.2	E3	B			
1MS-35	EMO	OFD-122A-1.3	L2	B		25	
1MS-36	EMO	OFD-122A-1.3	F2	B		25	
1MS-76	EMO	OFD-122A-1.1	C10	B		26	
1MS-79	EMO	OFD-122A-1.1	I10	B		26	
1MS-82	EMO	OFD-122A-1.4	I2	B			
1MS-83	CK	OFD-122A-1.4	H2	C			
1MS-84	EMO	OFD-122A-1.4	G2	B			
1MS-85	CK	OFD-122A-1.4	G2	C			
1MS-87	AOV	OFD-122A-1.4	H3	B			
1MS-91	CK	OFD-122A-1.4	H5	C			
1MS-93	AOV	OFD-122A-1.4	H7	B			
1MS-94	STP	OFD-122A-1.4	H8	B			
1MS-102	STP	OFD-122B-1.1	J3	B		11	
1MS-103	STP	OFD-122B-1.1	J4	B		11	
1MS-104	STP	OFD-122B-1.1	J4	B		11	
1MS-105	STP	OFD-122B-1.1	J5	B		11	
1N-106	MAN	OFD-127B-1.2	E4	A			Passive
1N-107	MAN	OFD-127B-1.2	F4	A			Passive
1N-129	CK	OFD-127B-1.2	G7	A/C	30		
1N-131	CK	OFD-127B-1.2	J7	A/C	30		
1N-246	CK	OFD-127B-1.2	E10	A			Passive
1PR-1	EMO	OFD-116A-1.1	F3	A	3		Rev. Dir. Leak Test
1PR-2	PST	OFD-116A-1.1	F5	A	3		
1PR-5	PST	OFD-116A-1.1	D5	A	3		
1PR-6	EMO	OFD-116A-1.1	D3	A	3		Rev. Dir. Leak Test
1PR-7	EMO	OFD-116C-1.1	G3	A			Rev. Dir. Leak Test
1PR-8	AOV	OFD-116C-1.1	K3	A			
1PR-9	EMO	OFD-116C-1.1	D2	A			Rev. Dir. Leak Test
1PR-10	AOV	OFD-116C-1.1	C4	A			
1PR-15	EMO	OFD-116B-1.1	I11	B			
1PR-19	EMO	OFD-116B-1.1	E11	B			
1PR-34	CK	OFD-116B-1.1	I11	C			
1PR-35	CK	OFD-116B-1.1	E11	C			
1PR-59	EMO	OFD-116C-1.1	H2	A			Rev. Dir. Leak Test
1PR-60	EMO	OFD-116C-1.1	D3	A			Rev. Dir. Leak Test
1PR-61	MAN	OFD-116C-1.1	F9	B			

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
1PR-69	MAN	OFD-116C-1.1	J10	B			
1PR-70	MAN	OFD-116C-1.1	D10	B			
1PR-71	SOV	OFD-110A-1.3	K2	B	28		
1PR-72	SOV	OFD-110A-1.3	K2	B	28		
1PR-73	SOV	OFD-110A-1.3	J2	B	28		
1PR-74	SOV	OFD-110A-1.3	I2	B	28		
1PR-75	SOV	OFD-110A-1.3	H2	B	28		
1PR-76	SOV	OFD-110A-1.3	E2	B	28		
1PR-77	SOV	OFD-110A-1.3	E2	B	28		
1PR-78	SOV	OFD-110A-1.3	E2	B	28		
1PR-79	SOV	OFD-110A-1.3	D2	B	28		
1PR-80	SOV	OFD-110A-1.3	C2	B	28		
1PR-81	SOV	OFD-110A-1.3	J6	A			
1PR-84	SOV	OFD-110A-1.3	K6	A			
1PR-87	SOV	OFD-110A-1.3	E6	A			
1PR-90	SOV	OFD-110A-1.3	F6	A			
1RC-1	SOV	OFD-100A-1.2	H10	B		37	
1RC-4	EMO	OFD-100A-1.2	J9	B			
1RC-5	EMO	OFD-110A-1.1	I3	A			
1RC-6	EMO	OFD-110A-1.1	H3	A			
1RC-7	PST	OFD-110A-1.1	I6	A			
1RC-66	RV	OFD-100A-1.2	J9	B		19	
1RC-67	RV	OFD-100A-1.2	J8	C			
1RC-68	RV	OFD-100A-1.2	J7	C			
1RC-155	SOV	OFD-100A-1.1	I4	B	20		
1RC-156	SOV	OFD-100A-1.1	J4	B	20		
1RC-157	SOV	OFD-100A-1.1	I12	B	20		
1RC-158	SOV	OFD-100A-1.1	I11	B	20		
1RC-159	SOV	OFD-100A-1.1	I9	B	20		
1RC-160	SOV	OFD-100A-1.1	I9	B	20		
1RC-164	SOV	OFD-110A-1.4	G4	A			
1RC-165	SOV	OFD-110A-1.4	G4	A			
1SF-60	MAN	OFD-104A-1.1	D3	A			Passive
1SF-61	MAN	OFD-104A-1.1	D3	A			Passive
1SF-72	MAN	OFD-104A-1.1	J3	A			Passive
1SF-73	MAN	OFD-104A-1.1	J3	A			Passive
1SF-76	MAN	OFD-104A-1.1	D3	A			Passive
1SF-82-SSF	EMO	OFD-101A-1.5	F2	A			
1SF-97-SSF	EMO	OFD-104A-1.1	K3	A			
U1 RV CHECKS	CK	N/A		C	24		

APPENDIX B

UNIT 2 VALVE TABLE

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
2AS-39	CK	OFD-122A-2.4	H6	23			
2BA-171	MAN	OFD-137A-2.2	G8				Passive, Rev. Dir. Leak Test
2BA-172	MAN	OFD-137A-2.2	G9				Passive, Rev. Dir. Leak Test
2BS-1	EMO	OFD-103A-2.1	J8				
2BS-2	EMO	OFD-103A-2.1	E8				
2BS-5	CK	OFD-102A-2.1	E8	11			
2BS-6	CK	OFD-102A-2.1	C10	11			
2BS-11	CK	OFD-103A-2.1	J6	12			
2BS-14	CK	OFD-103A-2.1	J10	13			
2BS-16	CK	OFD-103A-2.1	E6	12			
2BS-19	CK	OFD-103A-2.1	E10	13			
2C-176	AOV	OFD-121A-2.8	I7		36		
2C-187	AOV	OFD-121A-2.8	G7		36		
2C-192	AOV	OFD-121A-2.8	J7		36		
2C-391	EMO	OFD-121A-2.8	J11		20		
2C-572	CK	OFD-121A-2.8	E6		30		
2C-573	MAN	OFD-121A-2.8	D6		24		
2C-850	CK	OFD-121A-2.8	D4	22			
2C-852	CK	OFD-121A-2.8	C4	22			
2CA-27	MAN	OFD-127B-2.2	G7				Passive
2CA-29	MAN	OFD-127B-2.2	J7				Passive
2CC-7	EMO	OFD-144A-2.2	D11		38		Rev. Dir. Leak Test
2CC-8	PST	OFD-144A-2.2	D13		12		
2CC-20	CK	OFD-144A-2.2	D3	16			
2CC-24	CK	OFD-144A-2.2	D1	16			
2CC-76	CK	OFD-144A-2.3	H6	16			
2CC-77	CK	OFD-144A-2.3	H7	16			
2CCW-7	EMO	OFD-133A-2.2	D2				
2CCW-10	EMO	OFD-133A-2.1	J2				
2CCW-11	EMO	OFD-133A-2.1	J5				
2CCW-12	EMO	OFD-133A-2.1	J7				
2CCW-13	EMO	OFD-133A-2.1	J10				
2CCW-268-SSF	EMO	OFD-133A-2.5	I12				
2CCW-269-SSF	EMO	OFD-121D-2.1	G13		1		
2CCW-287-SSF	EMO	OFD-133A-2.5	H12				
2CCW-304	CK	OFD-133A-2.2	K14				
2CF-1	EMO	OFD-102A-2.3	E10		33		
2CF-2	EMO	OFD-102A-2.3	E6		33		
2CF-3	EMO	OFD-102A-2.3	G10				
2CF-4	EMO	OFD-102A-2.3	G4				
2CF-7	MAN	OFD-102A-2.3	F3				Passive
2CF-11	CK	OFD-102A-2.3	D10	10			
2CF-12	CK	OFD-102A-2.3	D10	17			
2CF-13	CK	OFD-102A-2.3	D6	10			
2CF-14	CK	OFD-102A-2.3	D6	17			
2CF-19	MAN	OFD-102A-2.3	G3				

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
2CF-34	MAN	OFD-102A-2.3	J7				Passive
2CF-35	MAN	OFD-102A-2.3	I4				Passive
2CF-36	MAN	OFD-102A-2.3	I4				Passive
2CF-37	MAN	OFD-102A-2.3	J4				Passive
2CF-42	CK	OFD-127B-2.2	G11	25			
2CF-44	CK	OFD-127B-2.2	J11	25			
2CS-5	EMO	OFD-107A-2.2	D5				Rev. Dir. Leak Test
2CS-6	AOV	OFD-107A-2.2	D8				
2CS-11	CK	OFD-107A-2.1	J2	14			
2CS-12	CK	OFD-107A-2.1	J5	14			
2DW-59	MAN	OFD-106E-2.1	H3				Passive
2DW-60	MAN	OFD-106E-2.1	H4				Passive
2FDW-32	PST	OFD-121B-2.3	J6		23		
2FDW-33	EMO	OFD-121B-2.3	K5		10		
2FDW-35	AOV	OFD-121B-2.3	K6		10		
2FDW-39	CK	OFD-121D-2.1	J10	26			
2FDW-41	PST	OFD-121B-2.3	D7		23		
2FDW-42	EMO	OFD-121B-2.3	E5		10		
2FDW-44	AOV	OFD-121B-2.3	F7		10		
2FDW-103	EMO	OFD-121B-2.5	J9				Passive
2FDW-104	EMO	OFD-121B-2.5	C9				Passive
2FDW-105	EMO	OFD-110A-2.1	F3				
2FDW-106	PST	OFD-110A-2.1	F6				
2FDW-107	EMO	OFD-110A-2.1	D3				
2FDW-108	PST	OFD-110A-2.1	D6				
2FDW-232	CK	OFD-121D-2.1	K13	15			
2FDW-233	CK	OFD-121D-2.1	D13	15			
2FDW-311	CK	OFD-121D-2.1	J6	27			
2FDW-312	CK	OFD-121D-2.1	E7	27			
2FDW-315	AOV	OFD-121D-2.1	K10		29		
2FDW-316	AOV	OFD-121D-2.1	D10		29		
2FDW-317	CK	OFD-121D-2.1	K10	1			
2FDW-318	CK	OFD-121D-2.1	D10	1			
2FDW-329	MAN	OFD-121B-2.5	I8				Passive
2FDW-331	MAN	OFD-121B-2.5	C8				Passive
2FDW-334	MAN	OFD-121B-2.5	K7				Passive
2FDW-335	MAN	OFD-121B-2.5	C6				Passive
2FDW-345	CK	OFD-121D-2.1	K12	31			
2FDW-346	CK	OFD-121D-2.1	D12	2			
2FDW-347-SSF	EMO	OFD-121D-2.1	D13		16		
2FDW-368	EMO	OFD-121D-2.1	J7				
2FDW-369	EMO	OFD-121D-2.1	E6				
2FDW-370	CK	OFD-121D-2.1	K3				
2FDW-372	EMO	OFD-121D-2.1	K7				
2FDW-373	CK	OFD-121D-2.1	K7	1			
2FDW-378	CK	OFD-121D-2.1	K3				

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
2FDW-380	CK	OFD-121D-2.1	D3				
2FDW-382	EMO	OFD-121D-2.1	D7				
2FDW-383	CK	OFD-121D-2.1	D6	1			
2FDW-388	CK	OFD-121D-2.1	D3				
2FDW-432	CK	OFD-121D-2.1	E10	26			
2FDW-442	CK	OFD-121D-2.1	D11	2			
2FW-64	MAN	OFD-106E-2.1	J3				Passive
2FW-65	MAN	OFD-106E-2.1	J6				Passive, Rev. Dir. Leak Test
2GWD-12	EMO	OFD-107A-2.1	J11				Rev. Dir. Leak Test
2GWD-13	AOV	OFD-107A-2.1	K13				
2HP-3	EMO	OFD-101A-2.1	L5				
2HP-4	EMO	OFD-101A-2.1	J5				
2HP-5	PST	OFD-101A-2.1	K8		3		
2HP-20	EMO	OFD-101A-2.1	E6		35		Rev. Dir. Leak Test
2HP-21	PST	OFD-101A-2.1	E8		4		
2HP-24	EMO	OFD-101A-2.3	I3		28		
2HP-25	EMO	OFD-101A-2.3	F3		28		
2HP-26	EMO	OFD-101A-2.4	J7		5		
2HP-27	EMO	OFD-101A-2.4	D7				
2HP-78	CK	OFD-101A-2.2	F6				
2HP-97	CK	OFD-101A-2.2	D12	32			
2HP-101	CK	OFD-101A-2.3	J3	4			
2HP-102	CK	OFD-101A-2.3	E3	4			
2HP-105	CK	OFD-101A-2.3	J10	5			
2HP-109	CK	OFD-101A-2.3	G10	5			
2HP-113	CK	OFD-101A-2.3	D10	5			
2HP-126	CK	OFD-101A-2.4	J13	6			
2HP-127	CK	OFD-101A-2.4	J13	6			
2HP-144	CK	OFD-101A-2.4	F12	19			Rev. Dir. Leak Test
2HP-145	CK	OFD-101A-2.4	G12	19			Rev. Dir. Leak Test
2HP-146	CK	OFD-101A-2.4	H12	19			
2HP-147	CK	OFD-101A-2.4	I12	19			
2HP-152	CK	OFD-101A-2.4	D13	7			
2HP-153	CK	OFD-101A-2.4	E13	7			
2HP-155	MAN	OFD-127B-2.2	H7				Passive
2HP-156	MAN	OFD-127B-2.2	I7				Passive
2HP-188	CK	OFD-101A-2.4	D11	8			
2HP-189	CK	OFD-101A-2.2	F5	33			
2HP-194	CK	OFD-101A-2.4	J10	9			
2HP-248	CK	OFD-101A-2.3	L10	34			
2HP-250	CK	OFD-101A-2.3	I9	34			
2HP-252	CK	OFD-101A-2.3	E9	34			
2HP-286	CK	OFD-101A-2.4	H10	19			
2HP-363	MAN	OFD-101A-2.2	F7		32		
2HP-364	CK	OFD-101A-2.2	F7	33			
2HP-389	CK	OFD-101A-2.4	I10	19			

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
2HP-390	CK	OFD-101A-2.4	G10	19			
2HP-398-SSF	EMO	OFD-101A-2.5	F11		14		
2HP-399-SSF	CK	OFD-101A-2.5	H13		2		
2HP-400-SSF	CK	OFD-101A-2.5	G13		2		
2HP-401-SSF	CK	OFD-101A-2.5	F13		2		
2HP-402-SSF	CK	OFD-101A-2.5	F13		2		
2HP-405-SSF	EMO	OFD-101A-2.5	H10				
2HP-409	EMO	OFD-101A-2.4	E8		27		
2HP-410	EMO	OFD-101A-2.4	F7		27		
2HP-417-SSF	EMO	OFD-101A-2.5	I9				
2HP-426-SSF	EMO	OFD-101A-2.5	J9		15		
2HP-428-SSF	EMO	OFD-101A-2.5	J13				
2HP-454	CK	OFD-101A-2.4	G10	19			
2HPSW-184	AOV	OFD-124A-2.3	K10				
2HPSW-193	CK	OFD-124A-2.3	K11				
2IA-90	MAN	OFD-137B-1.2	D7				Passive
2IA-91	MAN	OFD-137B-1.2	C7				Passive
2LP-1	EMO	OFD-102A-2.1	H2		6		
2LP-2	EMO	OFD-102A-2.1	H2		6		
2LP-3	EMO	OFD-102A-2.1	H6				
2LP-12	EMO	OFD-102A-2.2	K11				
2LP-14	EMO	OFD-102A-2.2	E11				
2LP-15	EMO	OFD-102A-2.2	L11				
2LP-16	EMO	OFD-102A-2.2	D11				
2LP-17	EMO	OFD-102A-2.2	K12		13		
2LP-18	EMO	OFD-102A-2.2	E13		13		
2LP-19	EMO	OFD-102A-2.1	D5				
2LP-20	EMO	OFD-102A-2.1	D5				
2LP-21	EMO	OFD-102A-2.1	E7				
2LP-22	EMO	OFD-102A-2.1	D7				
2LP-28	MAN	OFD-102A-2.1	H10		31		
2LP-29	CK	OFD-102A-2.1	F6				
2LP-30	CK	OFD-102A-2.1	D6				
2LP-31	CK	OFD-102A-2.2	K5		22		
2LP-33	CK	OFD-102A-2.2	E5				
2LP-47	CK	OFD-102A-2.2	E14		7		
2LP-48	CK	OFD-102A-2.2	K14		7		
2LP-55	CK	OFD-101A-2.3	K3	21			
2LP-57	CK	OFD-101A-2.3	C3	21			
2LP-103	EMO	OFD-102A-2.1	H2		8		
2LP-104	EMO	OFD-102A-2.1	F2		8		
2LP-108	MAN	OFD-102A-2.1	H6				
2LP-4	EMO	OFD-124B-2.1	K6				
2LP-5	EMO	OFD-124B-2.1	H6				
2LP-6	EMO	OFD-124B-2.4	L2		17		
2LP-15	EMO	OFD-124B-2.4	G14		18		

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
2LPSW-18	EMO	OFD-124B-2.2	D3				
2LPSW-21	EMO	OFD-124B-2.2	D8				
2LPSW-24	EMO	OFD-124B-2.2	D12				
2LPSW-75	CK	OFD-124B-2.1	K7				
2LPSW-76	CK	OFD-124B-2.1	H7				
2LPSW-138	PST	OFD-124A-2.3	L11				
2LPSW-148	CK	OFD-124B-2.1	L7				
2LPSW-151	CK	OFD-124B-2.1	G10				
2LPSW-503	CK	OFD-124B-2.1	G3				
2LPSW-565	EMO	OFD-124B-2.2	J8				
2LPSW-566	EMO	OFD-124B-2.2	I8				
2LRT-17	AOV	OFD-137E-1.1	H10				Passive
2LRT-24	MAN	OFD-137E-1.1	G11				Passive
2LRT-25	MAN	OFD-137E-1.1	G11				Passive
2LRT-36	MAN	OFD-137E-1.1	F11				Passive
2LRT-37	MAN	OFD-137E-1.1	F11				Passive
2LRT-38	MAN	OFD-137E-1.1	H11				Passive
2LRT-39	MAN	OFD-137E-1.1	H12				Passive
2LWD-1	EMO	OFD-107B-2.1	C11				Rev. Dir. Leak Test
2LWD-2	AOV	OFD-107B-2.1	C12				
2LWD-99	MAN	OFD-107D-2.2	G8				Passive
2LWD-103	MAN	OFD-107D-2.2	G8				Passive
2MS-1	RV	OFD-122A-2.1	J9				
2MS-2	RV	OFD-122A-2.1	J4				
2MS-3	RV	OFD-122A-2.1	J7				
2MS-4	RV	OFD-122A-2.1	J5				
2MS-5	RV	OFD-122A-2.1	J8				
2MS-6	RV	OFD-122A-2.1	J5				
2MS-7	RV	OFD-122A-2.1	J7				
2MS-8	RV	OFD-122A-2.1	J6				
2MS-9	RV	OFD-122A-2.1	D9				
2MS-10	RV	OFD-122A-2.1	D4				
2MS-11	RV	OFD-122A-2.1	D7				
2MS-12	RV	OFD-122A-2.1	D5				
2MS-13	RV	OFD-122A-2.1	D8				
2MS-14	RV	OFD-122A-2.1	D5				
2MS-15	RV	OFD-122A-2.1	D7				
2MS-16	RV	OFD-122A-2.1	D6				
2MS-17	EMO	OFD-122A-2.2	I5		21		
2MS-24	EMO	OFD-122A-2.2	H3				
2MS-26	EMO	OFD-122A-2.2	D5		21		
2MS-33	EMO	OFD-122A-2.2	E3				
2MS-35	EMO	OFD-122A-2.3	L2		25		
2MS-36	EMO	OFD-122A-2.3	F2		25		
2MS-76	EMO	OFD-122A-2.1	I10		26		
2MS-79	EMO	OFD-122A-2.1	C10		26		

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
2MS-82	EMO	OFD-122A-2.4	I2				
2MS-83	CK	OFD-122A-2.4	H2				
2MS-84	EMO	OFD-122A-2.4	G2				
2MS-85	CK	OFD-122A-2.4	G2				
2MS-87	AOV	OFD-122A-2.4	H3				
2MS-91	CK	OFD-122A-2.4	H5				
2MS-93	AOV	OFD-122A-2.4	H7				
2MS-94	STP	OFD-122A-2.4	H8				
2MS-102	SV	OFD-122B-2.1	J3		11		
2MS-103	SV	OFD-122B-2.1	J4		11		
2MS-104	SV	OFD-122B-2.1	J4		11		
2MS-105	SV	OFD-122B-2.1	J5		11		
2N-129	CK	OFD-127B-2.2	G7	30			
2N-131	CK	OFD-127B-2.2	J7	30			
2N-246	CK	OFD-127B-2.2	E10				Passive
2N-263	MAN	OFD-127B-2.2	E7				Passive
2PR-1	EMO	OFD-116A-2.1	G3	3			Rev. Dir. Leak Test
2PR-2	PST	OFD-116A-2.1	G5	3			
2PR-5	PST	OFD-116A-2.1	D5	3			
2PR-6	EMO	OFD-116A-2.1	D3	3			Rev. Dir. Leak Test
2PR-7	EMO	OFD-116C-2.1	G3				Rev. Dir. Leak Test
2PR-8	AOV	OFD-116C-2.1	K3				
2PR-9	EMO	OFD-116C-2.1	D2				Rev. Dir. Leak Test
2PR-10	AOV	OFD-116C-2.1	C4				
2PR-15	EMO	OFD-116B-2.1	I11				
2PR-19	EMO	OFD-116B-2.1	E11				
2PR-34	CK	OFD-116B-2.1	I11				
2PR-35	CK	OFD-116B-2.1	E11				
2PR-59	EMO	OFD-116C-2.1	H3				Rev. Dir. Leak Test
2PR-60	EMO	OFD-116C-2.1	D3				Rev. Dir. Leak Test
2PR-61	MAN	OFD-116C-2.1	E9				
2PR-69	MAN	OFD-116C-2.1	J10				
2PR-70	MAN	OFD-116C-2.1	D10				
2PR-71	SOV	OFD-110A-2.3	K2	28			
2PR-72	SOV	OFD-110A-2.3	K2	28			
2PR-73	SOV	OFD-110A-2.3	J2	28			
2PR-74	SOV	OFD-110A-2.3	I2	28			
2PR-75	SOV	OFD-110A-2.3	H2	28			
2PR-76	SOV	OFD-110A-2.3	F2	28			
2PR-77	SOV	OFD-110A-2.3	F2	28			
2PR-78	SOV	OFD-110A-2.3	E2	28			
2PR-79	SOV	OFD-110A-2.3	D2	28			
2PR-80	SOV	OFD-110A-2.3	C2	28			
2PR-81	SOV	OFD-110A-2.3	J6				
2PR-84	SOV	OFD-110A-2.3	K6				
2PR-87	SOV	OFD-110A-2.3	E6				

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
2PR-90	SOV	OFD-110A-2.3	F6				
2RC-1	SOV	OFD-100A-2.2	H10		37		
2RC-4	EMO	OFD-100A-2.2	J9				
2RC-5	EMO	OFD-110A-2.1	I3				
2RC-6	EMO	OFD-110A-2.1	H3				
2RC-7	PST	OFD-110A-2.1	I6				
2RC-66	RV	OFD-100A-2.2	J9		19		
2RC-67	RV	OFD-100A-2.2	J8				
2RC-68	RV	OFD-100A-2.2	J7				
2RC-155	SOV	OFD-100A-2.1	J4	20			
2RC-156	SOV	OFD-100A-2.1	J4	20			
2RC-157	SOV	OFD-100A-2.1	I11	20			
2RC-158	SOV	OFD-100A-2.1	I11	20			
2RC-159	SOV	OFD-100A-2.1	I9	20			
2RC-160	SOV	OFD-100A-2.1	I9	20			
2RC-164	SOV	OFD-110A-2.4	G4				
2RC-165	SOV	OFD-110A-2.4	G4				
2SF-61	MAN	OFD-104A-1.1	D12				Passive
2SF-72	MAN	OFD-104A-1.1	D3				Passive
2SF-73	MAN	OFD-104A-1.1	J12				Passive
2SF-76	MAN	OFD-104A-1.1	D12				Passive
2SF-81	MAN	OFD-104A-1.1	D12				Passive
2SF-82-SSF	EMO	OFD-101A-2.5	F2				
2SF-87	MAN	OFD-104A-1.1	D12				Passive
2SF-97-SSF	EMO	OFD-104A-1.1	K12				
U2 RV CHECKS	CK	N/A		24			

APPENDIX C

UNIT 3 VALVE TABLE

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
3AS-39	CK	OFD-122A-3.4	H6	23			
3BA-171	MAN	OFD-137A-3.2	G8				Passive, Rev. Dir. Leak Test
3BA-172	MAN	OFD-137A-3.2	G9				Passive, Rev. Dir. Leak Test
3BS-1	EMO	OFD-103A-3.1	J8				
3BS-2	EMO	OFD-103A-3.1	E8				
3BS-5	CK	OFD-102A-3.1	F8	11			
3BS-6	CK	OFD-102A-3.1	C9	11			
3BS-11	CK	OFD-103A-3.1	J6	12			
3BS-14	CK	OFD-103A-3.1	J10	13			
3BS-16	CK	OFD-103A-3.1	E6	12			
3BS-19	CK	OFD-103A-3.1	E10	13			
3C-176	AOV	OFD-121A-3.8	I7		36		
3C-187	AOV	OFD-121A-3.8	G7		36		
3C-192	AOV	OFD-121A-3.8	J7		36		
3C-391	EMO	OFD-121A-3.8	J11		20		
3C-572	CK	OFD-121A-3.8	E7		30		
3C-573	MAN	OFD-121A-3.8	D7		24		
3C-850	CK	OFD-121A-3.8	D4	22			
3C-852	CK	OFD-121A-3.8	C4	22			
3CA-27	MAN	OFD-127B-3.2	G7				Passive
3CA-29	MAN	OFD-127B-3.2	J7				Passive
3CC-7	EMO	OFD-144A-3.2	D11		38		Rev. Dir. Leak Test
3CC-8	AOV	OFD-144A-3.2	D13		12		
3CC-20	CK	OFD-144A-3.2	D3	16			
3CC-24	CK	OFD-144A-3.2	D1	16			
3CC-76	CK	OFD-144A-3.3	H6	16			
3CC-77	CK	OFD-144A-3.3	H7	16			
3CCW-10	EMO	OFD-133A-3.1	J2				
3CCW-11	EMO	OFD-133A-3.1	J5				
3CCW-12	EMO	OFD-133A-3.1	J7				
3CCW-13	EMO	OFD-133A-3.1	J10				
3CCW-93	EMO	OFD-133A-3.2	D2				
3CCW-268-SSF	EMO	OFD-133A-2.5	I11				
3CCW-269-SSF	EMO	OFD-121D-3.1	G13		1		
3CCW-287-SSF	EMO	OFD-133A-2.5	H11				
3CCW-304	CK	OFD-133A-3.2	K14				
3CF-1	EMO	OFD-102A-3.3	F10		33		
3CF-2	EMO	OFD-102A-3.3	F6		33		
3CF-3	EMO	OFD-102A-3.3	G9				
3CF-4	EMO	OFD-102A-3.3	G5				
3CF-7	MAN	OFD-102A-3.3	G4				Passive
3CF-11	CK	OFD-102A-3.3	E10	10			
3CF-12	CK	OFD-102A-3.3	D9	17			
3CF-13	CK	OFD-102A-3.3	E6	10			
3CF-14	CK	OFD-102A-3.3	D7	17			
3CF-19	MAN	OFD-102A-3.3	G4				

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
3CF-34	MAN	OFD-102A-3.3	J7				Passive
3CF-35	MAN	OFD-102A-3.3	I4				Passive
3CF-36	MAN	OFD-102A-3.3	I4				Passive
3CF-37	MAN	OFD-102A-3.3	H8				Passive
3CF-42	CK	OFD-127B-3.2	G11	25			
3CF-44	CK	OFD-127B-3.2	J11	25			
3CS-5	EMO	OFD-107A-3.2	D5				Rev. Dir. Leak Test
3CS-6	AOV	OFD-107A-3.2	D8				
3CS-11	CK	OFD-107A-3.1	J3	14			
3CS-12	CK	OFD-107A-3.1	J5	14			
3DW-59	MAN	OFD-106E-3.1	H2				Passive
3DW-60	MAN	OFD-106E-3.1	H4				Passive
3FDW-32	PST	OFD-121B-3.3	J7		23		
3FDW-33	EMO	OFD-121B-3.3	K6		10		
3FDW-35	PST	OFD-121B-3.3	K7		10		
3FDW-39	CK	OFD-121D-3.1	J10	26			
3FDW-41	PST	OFD-121B-3.3	D7		23		
3FDW-42	EMO	OFD-121B-3.3	E6		10		
3FDW-44	AOV	OFD-121B-3.3	F7		10		
3FDW-103	EMO	OFD-121B-3.5	J9				Passive
3FDW-104	EMO	OFD-121B-3.5	D9				Passive
3FDW-105	EMO	OFD-110A-3.1	F3				
3FDW-106	PST	OFD-110A-3.1	F6				
3FDW-107	EMO	OFD-110A-3.1	D3				
3FDW-108	PST	OFD-110A-3.1	D6				
3FDW-232	CK	OFD-121D-3.1	K13	15			
3FDW-233	CK	OFD-121D-3.1	D13	15			
3FDW-311	CK	OFD-121D-3.1	I6	27			
3FDW-312	CK	OFD-121D-3.1	E6	27			
3FDW-315	AOV	OFD-121D-3.1	K10		29		
3FDW-316	AOV	OFD-121D-3.1	D10		29		
3FDW-317	CK	OFD-121D-3.1	K10	1			
3FDW-318	CK	OFD-121D-3.1	D10	1			
3FDW-329	MAN	OFD-121B-3.5	J8				Passive
3FDW-331	MAN	OFD-121B-3.5	D8				Passive
3FDW-334	MAN	OFD-121B-3.5	L6				Passive
3FDW-335	MAN	OFD-121B-3.5	C6				Passive
3FDW-345	CK	OFD-121D-3.1	K13	31			
3FDW-346	CK	OFD-121D-3.1	D12	2			
3FDW-347-SSF	EMO	OFD-121D-3.1	D13		16		
3FDW-368	EMO	OFD-121D-3.1	I7				
3FDW-369	EMO	OFD-121D-3.1	E7				
3FDW-370	CK	OFD-121D-3.1	K4				
3FDW-372	EMO	OFD-121D-3.1	K7				
3FDW-373	CK	OFD-121D-3.1	K7	1			
3FDW-378	CK	OFD-121D-3.1	D12				

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
3FDW-380	CK	OFD-121D-3.1	D4				
3FDW-382	EMO	OFD-121D-3.1	D7				
3FDW-383	CK	OFD-121D-3.1	D7	1			
3FDW-388	CK	OFD-121D-3.1	D4				
3FDW-432	CK	OFD-121D-3.1	E10	26			
3FDW-442	CK	OFD-121D-3.1	D11	2			
3FW-64	MAN	OFD-106E-3.1	J3				Passive
3FW-65	MAN	OFD-106E-3.1	J4				Passive, Rev. Dir. Leak Test
3GWD-12	EMO	OFD-107A-3.1	J11				Rev. Dir. Leak Test
3GWD-13	AOV	OFD-107A-3.1	K13				
3HP-3	EMO	OFD-101A-3.1	K5				
3HP-4	EMO	OFD-101A-3.1	J5				
3HP-5	PST	OFD-101A-3.1	K8		3		
3HP-20	EMO	OFD-101A-3.1	E6		35		Rev. Dir. Leak Test
3HP-21	PST	OFD-101A-3.1	E7		4		
3HP-24	EMO	OFD-101A-3.3	I2		28		
3HP-25	EMO	OFD-101A-3.3	F3		28		
3HP-26	EMO	OFD-101A-3.4	J6		5		
3HP-27	EMO	OFD-101A-3.4	D7				
3HP-78	CK	OFD-101A-3.2	F6				
3HP-97	CK	OFD-101A-3.2	D12	32			
3HP-101	CK	OFD-101A-3.3	J2	4			
3HP-102	CK	OFD-101A-3.3	E2	4			
3HP-105	CK	OFD-101A-3.3	J10	5			
3HP-109	CK	OFD-101A-3.3	G10	5			
3HP-113	CK	OFD-101A-3.3	D10	5			
3HP-126	CK	OFD-101A-3.4	J11	6			
3HP-127	CK	OFD-101A-3.4	J11	6			
3HP-144	CK	OFD-101A-3.4	H13	19			Rev. Dir. Leak Test
3HP-145	CK	OFD-101A-3.4	I13	19			Rev. Dir. Leak Test
3HP-146	CK	OFD-101A-3.4	G13	19			Rev. Dir. Leak Test
3HP-147	CK	OFD-101A-3.4	F13	19			Rev. Dir. Leak Test
3HP-152	CK	OFD-101A-3.4	D13	7			
3HP-153	CK	OFD-101A-3.4	E13	7			
3HP-155	MAN	OFD-127B-3.2	H7				Passive
3HP-156	MAN	OFD-127B-3.2	I7				Passive
3HP-188	CK	OFD-101A-3.4	D10	8			
3HP-189	CK	OFD-101A-3.2	F5	33			
3HP-194	CK	OFD-101A-3.4	J8	9			
3HP-248	CK	OFD-101A-3.3	H9	34			
3HP-250	CK	OFD-101A-3.3	I9	34			
3HP-252	CK	OFD-101A-3.3	F8	34			
3HP-285	CK	OFD-101A-3.4	F11	19			
3HP-286	CK	OFD-101A-3.4	G11	19			
3HP-363	MAN	OFD-101A-3.2	F7		32		
3HP-364	CK	OFD-101A-3.2	F8	33			

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
3HP-390	CK	OFD-101A-3.4	I11	19			
3HP-398-SSF	EMO	OFD-101A-3.5	F11		14		
3HP-399-SSF	CK	OFD-101A-3.5	H13		2		
3HP-400-SSF	CK	OFD-101A-3.5	G13		2		
3HP-401-SSF	CK	OFD-101A-3.5	F13		2		
3HP-402-SSF	CK	OFD-101A-3.5	F13		2		
3HP-405-SSF	EMO	OFD-101A-3.5	H10				
3HP-409	EMO	OFD-101A-3.4	E8		27		
3HP-410	EMO	OFD-101A-3.4	I7		27		
3HP-417-SSF	EMO	OFD-101A-3.5	I9				
3HP-426-SSF	EMO	OFD-101A-3.5	K9		15		
3HP-428-SSF	EMO	OFD-101A-3.5	J13				
3HP-454	CK	OFD-101A-3.4	H11	19			
3HPSW-184	PST	OFD-124A-3.3	K10				
3HPSW-193	CK	OFD-124A-3.3	K11				
3IA-90	MAN	OFD-137B-1.2	D11				Passive
3IA-91	MAN	OFD-137B-1.2	C11				Passive
3LP-1	EMO	OFD-102A-3.1	H2		6		
3LP-2	EMO	OFD-102A-3.1	H2		6		
3LP-3	EMO	OFD-102A-3.1	H6				
3LP-12	EMO	OFD-102A-3.2	K11				
3LP-14	EMO	OFD-102A-3.2	E11				
3LP-15	EMO	OFD-102A-3.2	K12				
3LP-16	EMO	OFD-102A-3.2	E12				
3LP-17	EMO	OFD-102A-3.2	K13		13		
3LP-18	EMO	OFD-102A-3.2	E13		13		
3LP-19	EMO	OFD-102A-3.1	D5				
3LP-20	EMO	OFD-102A-3.1	D5				
3LP-21	EMO	OFD-102A-3.1	E7				
3LP-22	EMO	OFD-102A-3.1	D7				
3LP-28	MAN	OFD-102A-3.1	H10		31		
3LP-29	CK	OFD-102A-3.1	E7	35			
3LP-30	CK	OFD-102A-3.1	C6	35			
3LP-31	CK	OFD-102A-3.2	K5		22		
3LP-33	CK	OFD-102A-3.2	E5				
3LP-47	CK	OFD-102A-3.2	E14		7		
3LP-48	CK	OFD-102A-3.2	K14		7		
3LP-55	CK	OFD-101A-3.3	K3	21			
3LP-57	CK	OFD-101A-3.3	D2	21			
3LP-103	EMO	OFD-102A-3.1	G2		8		
3LP-104	EMO	OFD-102A-3.1	G2		8		
3LP-108	MAN	OFD-102A-3.1	H6				
3LP-109	MAN	OFD-102A-3.1	H6				
3LP-4	EMO	OFD-124B-3.1	K6				
3LP-5	EMO	OFD-124B-3.1	H6				
3LP-6	EMO	OFD-124B-3.4	L2		17		

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
3LPSW-15	EMO	OFD-124B-3.4	G14		18		
3LPSW-18	EMO	OFD-124B-3.2	C3				
3LPSW-21	EMO	OFD-124B-3.2	C8				
3LPSW-24	EMO	OFD-124B-3.2	C12				
3LPSW-45	EMO	OFD-124A-3.1	E10		34		
3LPSW-75	CK	OFD-124B-3.1	K6				
3LPSW-76	CK	OFD-124B-3.1	H6				
3LPSW-121	CK	OFD-124A-3.1	J7				
3LPSW-124	CK	OFD-124A-3.1	G7				
3LPSW-138	PST	OFD-124A-3.3	L11				
3LPSW-148	CK	OFD-124B-3.1	L4				
3LPSW-151	CK	OFD-124B-3.1	F8				
3LPSW-503	CK	OFD-124B-3.1	F3				
3LPSW-565	EMO	OFD-124B-3.2	I8				
3LPSW-566	EMO	OFD-124B-3.2	I8				
3LRT-17	AOV	OFD-137E-1.1	E9				Passive
3LRT-24	MAN	OFD-137E-1.1	C11				Passive
3LRT-25	MAN	OFD-137E-1.1	C11				Passive
3LRT-36	MAN	OFD-137E-1.1	C11				Passive
3LRT-37	MAN	OFD-137E-1.1	C11				Passive
3LRT-38	MAN	OFD-137E-1.1	D11				Passive
3LRT-39	MAN	OFD-137E-1.1	D11				Passive
3LWD-1	EMO	OFD-107B-3.1	C11				
3LWD-2	AOV	OFD-107B-3.1	C12				Rev. Dir. Leak Test
3LWD-99	MAN	OFD-107D-3.2	G3				Passive
3LWD-103	MAN	OFD-107D-3.2	G3				Passive
3MS-1	RV	OFD-122A-3.1	J9				
3MS-2	RV	OFD-122A-3.1	J4				
3MS-3	RV	OFD-122A-3.1	J7				
3MS-4	RV	OFD-122A-3.1	J5				
3MS-5	RV	OFD-122A-3.1	J8				
3MS-6	RV	OFD-122A-3.1	J5				
3MS-7	RV	OFD-122A-3.1	J7				
3MS-8	RV	OFD-122A-3.1	J6				
3MS-9	RV	OFD-122A-3.1	D9				
3MS-10	RV	OFD-122A-3.1	D4				
3MS-11	RV	OFD-122A-3.1	D7				
3MS-12	RV	OFD-122A-3.1	D5				
3MS-13	RV	OFD-122A-3.1	D8				
3MS-14	RV	OFD-122A-3.1	D5				
3MS-15	RV	OFD-122A-3.1	D7				
3MS-16	RV	OFD-122A-3.1	D6				
3MS-17	EMO	OFD-122A-3.2	I5		21		
3MS-24	EMO	OFD-122A-3.2	H3				
3MS-26	EMO	OFD-122A-3.2	D5		21		
3MS-33	EMO	OFD-122A-3.2	E3				

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
3MS-35	EMO	OFD-122A-3.3	L2		25		
3MS-36	EMO	OFD-122A-3.3	F2		25		
3MS-76	EMO	OFD-122A-3.1	I10		26		
3MS-79	EMO	OFD-122A-3.1	C10		26		
3MS-82	EMO	OFD-122A-3.4	I2				
3MS-83	CK	OFD-122A-3.4	H2				
3MS-84	EMO	OFD-122A-3.4	G2				
3MS-85	CK	OFD-122A-3.4	G2				
3MS-87	AOV	OFD-122A-3.4	H3				
3MS-91	CK	OFD-122A-3.4	H5				
3MS-93	AOV	OFD-122A-3.4	H7				
3MS-94	STP	OFD-122A-3.4	H8				
3MS-102	STP	OFD-122B-3.1	J3		11		
3MS-103	STP	OFD-122B-3.1	J4		11		
3MS-104	STP	OFD-122B-3.1	J4		11		
3MS-105	STP	OFD-122B-3.1	J5		11		
3N-129	CK	OFD-127B-3.2	G7	30			
3N-131	CK	OFD-127B-3.2	J7	30			
3N-246	CK	OFD-127B-3.2	E10				Passive
3N-263	MAN	OFD-127B-3.2	E7				Passive
3PR-1	EMO	OFD-116A-3.1	G3	3			Rev. Dir. Leak Test
3PR-2	PST	OFD-116A-3.1	G5	3			
3PR-5	PST	OFD-116A-3.1	D5	3			
3PR-6	EMO	OFD-116A-3.1	D3	3			Rev. Dir. Leak Test
3PR-7	EMO	OFD-116C-3.1	G3				Rev. Dir. Leak Test
3PR-8	AOV	OFD-116C-3.1	K3				
3PR-9	EMO	OFD-116C-3.1	D2				Rev. Dir. Leak Test
3PR-10	AOV	OFD-116C-3.1	C4				
3PR-15	EMO	OFD-116B-3.1	I11				
3PR-19	EMO	OFD-116B-3.1	E11				
3PR-34	CK	OFD-116B-3.1	I11				
3PR-35	CK	OFD-116B-3.1	E11				
3PR-59	EMO	OFD-116C-3.1	H3				Rev. Dir. Leak Test
3PR-60	EMO	OFD-116C-3.1	D3				Rev. Dir. Leak Test
3PR-61	MAN	OFD-116C-3.1	E9				
3PR-69	MAN	OFD-116C-3.1	J10				
3PR-70	MAN	OFD-116C-3.1	D10				
3PR-71	SOV	OFD-110A-3.3	K2	28			
3PR-72	SOV	OFD-110A-3.3	K2	28			
3PR-73	SOV	OFD-110A-3.3	J2	28			
3PR-74	SOV	OFD-110A-3.3	I2	28			
3PR-75	SOV	OFD-110A-3.3	H2	28			
3PR-76	SOV	OFD-110A-3.3	F2	28			
3PR-77	SOV	OFD-110A-3.3	F2	28			
3PR-78	SOV	OFD-110A-3.3	E2	28			
3PR-79	SOV	OFD-110A-3.3	D2	28			

VALVE	TYPE	FLOW DIAGRAM	FLOW COOR	VALVE CATEGORY	RELIEF	COLD S/D JUST.	REMARKS
3PR-80	SOV	OFD-110A-3.3	C2	28			
3PR-81	SOV	OFD-110A-3.3	J6				
3PR-84	SOV	OFD-110A-3.3	K6				
3PR-87	SOV	OFD-110A-3.3	E6				
3PR-90	SOV	OFD-110A-3.3	F6				
3RC-1	SOV	OFD-100A-3.2	H10		37		
3RC-4	EMO	OFD-100A-3.2	J9				
3RC-5	EMO	OFD-110A-3.1	I3				
3RC-6	EMO	OFD-110A-3.1	H3				
3RC-7	PST	OFD-110A-3.1	I6				
3RC-66	RV	OFD-100A-3.2	J9		19		
3RC-67	RV	OFD-100A-3.2	J8				
3RC-68	RV	OFD-100A-3.2	J7				
3RC-155	SOV	OFD-100A-3.1	J4	20			
3RC-156	SOV	OFD-100A-3.1	J4	20			
3RC-157	SOV	OFD-100A-3.1	I12	20			
3RC-158	SOV	OFD-100A-3.1	I11	20			
3RC-159	SOV	OFD-100A-3.1	I9	20			
3RC-160	SOV	OFD-100A-3.1	I9	20			
3RC-164	MAN	OFD-110A-3.4	G4				
3RC-165	MAN	OFD-110A-3.4	G4				
3SF-60	MAN	OFD-104A-3.1	C5				Passive
3SF-61	MAN	OFD-104A-3.1	C4				Passive
3SF-72	MAN	OFD-104A-3.1	J4				Passive
3SF-73	MAN	OFD-104A-3.1	J5				Passive
3SF-76	MAN	OFD-104A-3.1	C4				Passive
3SF-82-SSF	EMO	OFD-101A-3.5	F2				
3SF-87	MAN	OFD-104A-3.1	D4				Passive
3SF-97-SSF	EMO	OFD-104A-3.1	K3				
U3 RV CHECKS	CK	N/A		24			

APPENDIX D

VALVE RELIEF REQUESTS

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 1

I. Component for which relief is requested:

(a) Name(s) and Number(s): Emergency Feedwater to Once Through Steam Generator (OTSG) "A" or "B"

1FDW-317, 318, 373, 383

2FDW-317, 318, 373, 383

3FDW-317, 318, 373, 383

Drawing Number/Coordinates: OFD-121D-1.1/K-10, D-10, K-7, D-7
OFD-121D-2.1/K-10, D-10, K-7, D-7
OFD-121D-3.1/K-10, D-10, K-7, D-7

(b) Function: These valves are normally closed preventing 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.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting 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.

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

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 2

I. Component for which relief is requested:

(a) Name(s) and Number(s): Steam Generators Emergency Header Check.

1FDW-346, 442

2FDW-346, 442

3FDW-346, 442

Drawing Number/Coordinates: OFD-121D-1.1/D-12, D-11

OFD-121D-2.1/D-12, D-11

OFD-121D-3.1/D-12, D-11

(b) Function: These valves are normally closed preventing 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 emergency feedwater nozzles.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves

III. Basis for requesting 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.

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

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 3

I. Component for which relief is requested:

(a) Name(s) and Number(s): Purge inlet and outlet valves

1PR-1, 2, 5, 6

2PR-1, 2, 5, 6

3PR-1, 2, 5, 6

Drawing Number/Coordinates: OFD-116A-1.1/G-3, G-5, D-5, D-3
OFD-116A-2.1/G-3, G-5, D-5, D-3
OFD-116A-3.1/G-3, G-5, D-5, D-3

(b) Function: Building Isolation

(c) ISI Class/Duke Class: B/C

(d) IWV-2000 Valve Category: A

II. Reference Code requirement which has been determined to be impractical:

IWV-3410 Valve Exercising Test.

III. Basis for requesting relief: These valves are taken out of service during unit startup and may be returned to service for purging during Cool Down.

IV. Alternate examination: These valves will be tested prior to returning the system to service when required for building isolation.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 4

I. Component for which relief is requested:

(a) Name(s) and Number(s): HPI Pump Emergency Supply Check

1HP-101, 102

2HP-101, 102

3HP-101, 102

Drawing Number/Coordinates: OFD-101A-1.3/J-3, E-3
OFD-101A-2.3/J-3, E-3
OFD-101A-3.3/J-2, E-2

(b) Function: Normally prevent backflow from HPI pump suction header to BWST. In an emergency, open to provide flow from BWST to HPI pumps, close to preclude diversion of flow from HPI suction header.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Quarterly HPI pump tests utilize suction from the letdown storage tank. These valves are located in piping which contains highly borated water from the BWST. Stroking these valves open 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. Stroking these valves open at cold shutdown could prevent reactor startup due to a relatively high boron concentration. In addition, full-stroke exercising these valves at power or cold shutdown could cause overpressurization of the RCS. Full flow for these valves would require running all three HPI pumps at full flow conditions which would rapidly fill the Pressurizer and could lead to equipment damage or contamination spread.

IV. Alternate examination: These valves will be sample disassembled at refueling. The positions on check valve disassembly in NRC Generic Letter 89-04 will be followed. Disassembly frequencies may be extended if justified by an evaluation of valve history and performed disassemblies. Closure of these valves will be verified by reverse flow testing.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 5

I. Component for which relief is requested:

(a) Name(s) and Number(s): HPI Pump Discharge Check

1HP-105, 109, 113

2HP-105, 109, 113

3HP-105, 109, 113

Drawing Number/Coordinates: OFD-101A-1.3/J-10, G-10, D-10

OFD-101A-2.3/J-10, G-10, D-10

OFD-101A-3.3/J-10, G-10, D-10

(b) Function: Valves open to pass flow from HPI pumps A, B and C.
Valves close to prevent diversion of flow through an idle pump.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Full-stroke exercising these valves during power operation or cold shutdown could cause overpressurization of the RCS.

IV. Alternate examination: These valves will be partial-stroke exercised quarterly and full-stroke exercised each refueling outage.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 6

I. Component for which relief is requested:

(a) Name(s) and Number(s): RC Loop "A1" or "A2" Injection Stop Check.

1HP-126, 127

2HP-126, 127

3HP-126, 127

Drawing Number/Coordinates: OFD-101A-1.4/J-13, J-13

OFD-101A-2.4/J-13, J-13

OFD-101A-3.4/J-12, J-12

(b) Function: These valves are open during normal operation. They are in the normal makeup flow path. In an emergency they must open or remain open. The HPI system injects into the RCS through these valves.

(c) ISI Class/Duke Class: A/A

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be full-stroke exercised at power or during cold shutdown due to the possibility of RCS overpressurization.

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

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 7

I. Component for which relief is requested:

(a) Name(s) and Number(s): RC Loop "B1" or "B2" Injection Stop Check.

1HP-152, 153

2HP-152, 153

3HP-152, 153

Drawing Number/Coordinates: OFD-101A-1.4/D-14, D-13

OFD-101A-2.4/D-13, E-13

OFD-101A-3.4/D-13, E-13

(b) Function: These valves are closed during normal operation preventing backflow from the RCS. In an emergency they open.

(c) ISI Class/Duke Class: A/A

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be full-stroke exercised at power or during cold shutdown due to the possibility of RCS overpressurization.

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

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 8

I. Component for which relief is requested:

(a) Name(s) and Number(s): HPI Loop "B" Check Valve.

1HP-188

2HP-188

3HP-188

Drawing Number/Coordinates: OFD-101A-1.4/D-11
OFD-101A-2.4/D-11
OFD-101A-3.4/D-10

(b) Function: These valves are closed during normal operation. In an emergency they open. They are in emergency injection flow paths.

(c) ISI Class/Duke Class: B/B & BC

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Exercising these valves at power would thermally stress injection nozzles.
Exercising these valves at cold shutdown could overpressurize the RCS.

IV. Alternate examination: These valves will be full-stroke exercised at each refueling outage.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 9

I. Component for which relief is requested:

(a) Name(s) and Number(s): HPI Loop "A" Check Valve.

1HP-194

2HP-194

3HP-194

Drawing Number/Coordinates: OFD-101A-1.4/J-10

OFD-101A-2.4/J-10

OFD-101A-3.4/J-8

(b) Function: These valves are open during normal operation. They are in normal injection flow paths. These flow paths are also emergency injection flow paths. Therefore, in an emergency these valves must open or remain open.

(c) ISI Class/Duke Class: B/B & BC

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be full-stroke exercised at power or at cold shutdown due to the possibility of RCS overpressurization.

IV. Alternate examination: These valves will be partial-stroke tested quarterly and full-stroked each refueling outage.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 10

I. Component for which relief is requested:

(a) Name(s) and Number(s): Core Flood Tank "A" and "B" Outlet Check

1CF-11, 13

2CF-11, 13

3CF-11, 13

Drawing Number/Coordinates: OFD-102A-1.3/E-10, E-6
OFD-102A-2.3/D-10, D-6
OFD-102A-3.3/E-10, E-6

(b) Function: These valves normally prevent backflow from RCS to core flood tanks. In an emergency they open to permit flow from core flood tanks to the Reactor Coolant System.

(c) ISI Class/Duke Class: A/A

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be subjected to greater than RCS pressure during power operation. They cannot be full-stroke exercised during cold shutdown due to the possibility of over pressurization and hydraulic shock to the system.

IV. Alternate examination: These valves will be tested to open each refueling outage. Testing will be performed at a lower than accident pressure condition and the data analyzed to verify that the valves will pass the required flow under accident conditions.
(Reference Duke Power Design Engineering Documents OSC-4500 (Unit 1), OSC-4660 (Unit 2), Unit 3 to be determined during Unit 3 EOC 13 Refueling Outage)

Partial stroke testing will be performed at cold shutdown.

Leak testing will be performed on a cold shutdown frequency consistent with ONS Technical Specification requirements for CF-12 and CF-14.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 11

I. Component for which relief is requested:

(a) Name(s) and Number(s): "A" or "B" RBSP Suction Check.

1BS-5, 6

2BS-5, 6

3BS-5, 6

Drawing Number/Coordinates: OFD-102A-1.1/E-8, C-10

OFD-102A-2.1/E-8, C-10

OFD-102A-3.1/F-8, C-9

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

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be full-stroke exercised because the present piping size and configuration prevent recirculation flow from equaling spray flow. Normal recirculation flow is approximately 1200 gpm and full flow for these valves is 1500 gpm.

IV. Alternate examination: These valves will be partial-stroke tested quarterly.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 12

I. Component for which relief is requested:

(a) Name(s) and Number(s): "A" or "B" RBS Pump Discharge Check.

1BS-11, 16

2BS-11, 16

3BS-11, 16

Drawing Number/Coordinates: OFD-103A-1.1/J-6, E-6

OFD-103A-2.1/J-6, E-6

OFD-103A-3.1/J-6, E-6

(b) Function: Loop A and Loop B pump discharge check valves.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be full-stroke exercised because the present piping size and configuration prevent recirculation flow from equaling design spray flow. Normal recirculation flow is approximately 1200 gpm and full flow for these valves is 1500 gpm.

IV. Alternate examination: These valves will be partial-stroke exercised quarterly.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 13

I. Component for which relief is requested:

(a) Name(s) and Number(s): "A" or "B" RBS Line Reactor Bldg. Isol. Check.

1BS-14, 19

2BS-14, 19

3BS-14, 19

Drawing Number/Coordinates: OFD-103A-1.1/J-10, E-10
OFD-103A-2.1/J-10, E-10
OFD-103A-3.1/J-10, E-10

(b) Function: Open to allow RB spray flow to header.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be full-stroke exercised because of the pipe size including the hook-up point, and the volume of air available. 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.

IV. Alternate examination: These valves will be sample disassembled at refueling. The positions on check valve disassembly in NRC Generic Letter 89-04 will be followed. Disassembly frequencies may be extended if justified by an evaluation of valve history and performed disassemblies.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 14

I. Component for which relief is requested:

(a) Name(s) and Number(s): Quench Tank Recirculation Penetration Check.

1CS-11, 12

2CS-11, 12

3CS-11, 12

Drawing Number/Coordinates: OFD-107A-1.1/J-2, J-5

OFD-107A-2.1/J-2, J-5

OFD-107A-3.1/J-3, J-5

(b) Function: Quench tank recirculation line penetration check valves.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting 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.

IV. Alternate examination: These valves are pneumatically tested at each refueling outage.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 15

I. Component for which relief is requested:

(a) Name(s) and Number(s): OTSG Emergency header Check Valve

1FDW-232, 233

2FDW-232, 233

3FDW-232, 233

Drawing Number/Coordinates: OFD-121D-1.1/K-13, D-13

OFD-121D-2.1/K-13, D-13

OFD-121D-3.1/K-13, D-13

(b) Function: These normally closed check valves open to supply emergency feedwater to the steam generators.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be exercised during power operation without thermal shocking the OTSGs. Exercising these valves during cold shutdown would require injection of Oxygen saturated water into the OTSGs and subsequently cause a delay in reactor startup.

IV. Alternate examination: These valves will be full-stroke exercised at each refueling outage.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 16

I. Component for which relief is requested:

(a) Name(s) and Number(s): Supply Header Penetration Isolation Check.
CRD Cooling Penetration Outside or Inside
Check.

1CC-20, 24, 76, 77

2CC-20, 24, 76, 77

3CC-20, 24, 76, 77

Drawing Number/Coordinates: OFD-144A-1.2/D-4, D-2,
OFD-144A-1.3/H-6, H-7
OFD-144A-2.2/D-3, D-1,
OFD-144A-2.3/H-6, H-8
OFD-144A-3.2/D-3, D-2,
OFD-144A-3.3/H-5, H-7

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

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Exercise 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.

IV. Alternate examination: The valves will be exercise and leak rate tested
at each refueling outage.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 17

I. Component for which relief is requested:

(a) Name(s) and Number(s): LPI Inlet Header "A" and "B" Check Valves

1CF-12, 14

2CF-12, 14

3CF-12, 14

Drawing Number/Coordinates: OFD-102A-1.3/D-9, D-7
OFD-102A-2.3/D-10, D-6
OFD-102A-3.3/D-9, D-7

(b) Function: These valves normally prevent backflow from RCS to LPI/CF Systems. In an emergency they open to permit flow from core flood tanks or LPI to the Reactor Coolant System.

(c) ISI Class/Duke Class: A/A

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves cannot be subjected to greater than RCS pressure during power operation. They cannot be full-stroke exercised during cold shutdown due to the possibility of over pressurization and hydraulic shock to the system.

IV. Alternate examination: These valves will be to verified to open each refueling outage. Testing will be performed at a lower than accident pressure condition and the data analyzed to verify that the valves will pass the required flow under accident conditions.
(Reference Duke Power Design Engineering Documents OSC-4500(Unit 1), OSC-4660(Unit 2), Unit 3 to be determined during Unit 3 EOC 13 Refueling Outage)

Partial stroke testing will be performed at cold shutdown.

Leak testing will be performed on a cold shutdown frequency consistent with ONS Technical Specification requirements.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 18

- I. Component for which relief is requested:
- (a) Name(s) and Number(s): DW to RCP Seal Vent.
1DW-155, 156
Drawing Number/Coordinates: OFD-106E-1.1/E-3, E-4
 - (b) Function: Demineralized water line to the third seals of the reactor coolant pumps, building penetration isolation valves.
 - (c) ISI Class/Duke Class: B/F
 - (d) IWV-2000 Valve Category: A/C
- II. Reference Code requirement which has been determined to be impractical:
IWV-3520 Tests for Check Valves.
- III. Basis for requesting relief: Stroking valves closed can only be done by leak rate test; therefore, verifying these valves closed at power or cold shutdown would require excessive manpower, cause excessive exposure and generate excessive liquid waste.
- IV. Alternate examination: These valves are verified closed by leak rate testing during refueling outages.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 19

I. Component for which relief is requested:

(a) Name(s) and Number(s): Seal Supply to RC Pump A1, A2, B1, or B2.

1HP-144, 145, 146, 147, 390, 454, 457, 393

2HP-144, 145, 146, 147, 454, 286, 389, 390

3HP-144, 145, 146, 147, 390, 454, 285, 286

Drawing Number/Coordinates: OFD-101A-1.4/G-13, F-13, H-13, I-12,
E-10, G-10, H-10, I-10
OFD-101A-2.4/F-12, G-12, H-12, I-12,
F-10, H-10, I-10, G-10
OFD-101A-3.4/H-13, I-13, G-13, F-13,
I-11, H-11, F-11, G-11

(b) Function: RB Isolation of High Pressure Injection to Reactor Coolant
Pump Seals.

(c) ISI Class/Duke Class: B/B & BC

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves

III. Basis for requesting relief: Stroking valves closed can only be done by
leak rate test; therefore, verifying these
valves closed at power or cold shutdown
would require excessive manpower, cause
excessive exposure and generate excessive
liquid waste.

IV. Alternate examination: These valves are verified closed by leak rate
testing during refueling outages.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 20

I. Component for which relief is requested:

(a) Name(s) and Number(s): Loop "A" or "B" Vent; Loop "A" or "B" Vent Block, Reactor Vessel Head Vent; Reactor Vessel head Vent Block.

1RC-155, 156, 157, 158, 159, 160

2RC-155, 156, 157, 158, 159, 160

3RC-155, 156, 157, 158, 159, 160

Drawing Number/Coordinates: OFD-100A-1.1/J-4, J-4, I-11, I-11, I-9, I-9
OFD-100A-2.1/J-4, J-4, I-11, I-11, I-9, I-9
OFD-100A-3.1/J-4, J-4, I-11, I-11, I-9, I-9

(b) Function: To vent non-compressible gases from the reactor coolant system.

(c) ISI Class/Duke Class: B/BC

(d) IWV-2000 Valve Category: B

II. Reference Code requirement which has been determined to be impractical:

IWV-3410 Valve Exercise Test.

III. Basis for requesting relief: Failure of these valves during exercise testing at power operation would constitute a small break LOCA. In addition, stroking these valves at shutdown would release reactor coolant to reactor building ventilation system. This would cause unjustified contamination and radwaste.

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

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 21

I. Component for which relief is requested:

(a) Name(s) and Number(s): "A" or "B" LPI Cooler Out. to HP Pump Suction.

1LP-55, 57

2LP-55, 57

3LP-55, 57

Drawing Number/Coordinates: OFD-101A-1.3/K-3, C-3
OFD-101A-2.3/K-3, C-3
OFD-101A-3.3/K-3, D-1

(b) Function: Supply HPI Pump Suction from the Reactor Building Emergency Sump via Low Pressure Injection/Decay Heat Removal System.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Test for Check Valves.

III. Basis for requesting relief: The piping served by these valves contains highly borated water from the BWST. Exercising these valves either at power or in normal cold shutdown condition would cause injection of highly borated water into the RCS, possibly causing a shutdown or requiring extensive feed and bleed prior to restart of the unit. Also, full stroking these valves at cold shutdown may overpressurize the RCS.

IV. Alternate examination: These valves will be full-stroke exercised open during refueling outages.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 22

I. Component for which relief is requested:

(a) Name(s) and Number(s): MDEFWPs Suction From Hotwell Check.

1C-850, 852

2C-850, 852

3C-850, 852

Drawing Number/Coordinates: OFD-121A-1.8/D-4, E-4
OFD-121A-2.8/D-4, C-4
OFD-121A-3.8/E-4, D-4

(b) Function: These valves connect the suction of the motor driven Emergency Feedwater Pump to the Hotwell when the Upper Surge Tank (UST) is isolated.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves

III. Basis for requesting relief: When vacuum is pulled in the condenser, there is not adequate NPSH to run the MDEFW Pumps with suction aligned to the hotwell. Testing with vacuum pulled and taking suction off the hotwell could result in damage to the MDEFW Pumps.

IV. Alternate examination: These valves will be full stroke exercised at refueling and at cold shutdown when condenser vacuum is broken.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 23

I. Component for which relief is requested:

(a) Name(s) and Number(s): Emergency Feedwater Pump Turbine Auxiliary
Steam Supply Check.

1AS-39
2AS-39
3AS-39

Drawing Number/Coordinates: OFD-122A-1.4/H-6
OFD-122A-2.4/H-6
OFD-122A-3.4/H-6

(b) Function: These valves open when steam is supplied from the
auxiliary steam header to the EFWPT. These valves are
required to close or remain closed when steam
is supplied from the main steam header(s).

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Due to system constraints, there is no
means to verify these valves close upon
cessation or reversal of flow.

IV. Alternate examination: These valves will be disassembled at refueling. The
positions on check valve disassembly in NRC Generic
Letter 89-04 will be followed. Disassembly
frequencies may be extended if justified by an
evaluation of valve history and performed
disassemblies.

These valves will be full-stroked open
quarterly.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 24

I. Component for which relief is requested:

- (a) Name(s) and Number(s): (Reactor Vessel) Eight Internal Check
(Vent) Valves (All Three Units)

Drawing Number/Coordinates: No OFD Drawings Assigned.

- (b) Function: These valves allow flow out a cold leg in event of a rupture.

- (c) ISI Class/Duke Class:

- (d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves are only accessible with the reactor head is removed.

IV. Alternate examination: These valves will be exercise tested at refueling outages.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 25

I. Component for which relief is requested:

(a) Name(s) and Number(s): Core Flood Tanks (CFTs) "A" and "B" Inlet Checks.

1CF-42, 44
2CF-42, 44
3CF-42, 44

Drawing Number/Coordinates: OFD-127B-1.2/G-11, J-11
OFD-127B-2.2/G-11, J-11
OFD-127B-3.2/G-11, J-11

(b) Function: These valves normally open to allow make-up to the CFTs and close to isolate the CFTs. In an emergency they close or remain closed to isolate containment.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Stroking these valves closed can only be done by leak rate test; therefore, verifying these valves are closed at power or cold shutdown would require excessive manpower, cause excessive exposure and generate excessive liquid waste.

IV. Alternate examination: These valves are verified closed by leak rate testing during refueling outages.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 26

I. Component for which relief is requested:

(a) Name(s) and Number(s): Normal Feedwater To Emergency Feedwater Checks.

1FDW-39, 432

2FDW-39, 432

3FDW-39, 432

Drawing Number/Coordinates: OFD-121D-1.1/J-10, E-10

OFD-121D-2.1/J-10, E-10

OFD-121D-3.1/J-10, E-10

(b) Function: These valves open to allow the normal feedwater pumps to feed the steam generators through the emergency header. During an emergency they close or remain closed to preclude a diversion of emergency feedwater.

(c) ISI Class/Duke Class: B & C/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Due to system constraints, there is no means to verify these valves close upon cessation or reversal of flow.

IV. Alternate examination: These valves will be sample disassembled at refueling. The positions on check valve disassembly in NRC Generic Letter 89-04 will be followed. Disassembly frequencies may be extended if justified by an evaluation of valve history and performed disassemblies.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 27

I. Component for which relief is requested:

(a) Name(s) and Number(s): Turbine Driven Emergency Feedwater Pump
Discharge Checks.

1FDW-311, 312
2FDW-311, 312
3FDW-311, 312

Drawing Number/Coordinates: OFD-121D-1.1/J-6, E-6
OFD-121D-2.1/J-6, E-7
OFD-121D-3.1/I-6, E-6

(b) Function: These valves open to allow the TDEFDW pump to feed the steam generators. They close to preclude diversion of flow when the TDEFDW pump is not running and MDEFDW pumps are running.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Emergency feedwater pumps must supply water to the steam generators in order to test these valves. The emergency feedwater pumps supply 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.

IV. Alternate examination: These valves will be full stroked open and closed at refueling.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 28

I. Component for which relief is requested:

(a) Name(s) and Number(s): Hydrogen Analyzer "A" and "B" Sample Select.

1PR-71, 72, 73, 74, 75, 76, 77, 78, 79, 80

2PR-71, 72, 73, 74, 75, 76, 77, 78, 79, 80

3PR-71, 72, 73, 74, 75, 76, 77, 78, 79, 80

Drawing Number/Coordinates: OFD-110A-1.3/K-2, J-2, I-2, H-2, F-2,
E-2, D-2, C-2
OFD-110A-2.3/K-2, J-2, I-2, H-2, F-2,
E-2, D-2, C-2
OFD-110A-3.3/K-2, J-2, I-2, H-2, F-2,
E-2, D-2, C-2

(b) Function: These valves open to align the hydrogen analyzer to different areas in the reactor building.

(c) ISI Class/Duke Class: B/C

(d) IWV-2000 Valve Category: B

II. Reference Code requirement which has been determined to be impractical:

IWV-3413 Stroke Time Test For Power Operated Valves.

III. Basis for requesting relief: These fast-acting solenoid valves do not have an external indicator which signals a change of disk position. An air pressure change is used to verify a change of disk position.

IV. Alternate examination: These valves will be stroked quarterly. Stroke times will not be measured.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 29

I. Component for which relief is requested:

(a) Name(s) and Number(s): LPSW "A" line to Turbine Building header.

1LPSW-139

Drawing Number/Coordinates: OFD-124A-1.1/C-8

(b) Function: Isolates Units 1 and 2 Main Turbine Oil Tank Coolers Supply from the "A" LPSW header.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Reference Code requirement which has been determined to be impractical:

IWV-3412 Exercising Procedure

III. Basis for requesting relief: This valve isolates both Unit 1 and Unit 2 Main Turbine Oil Tanks from the LPSW supply header. Failure of this valve in the closed position while Unit 1 or Unit 2 is at power would cause loss of MTOT cooling water. This would increase turbine oil temperature and could lead to high vibrations, turbine trip and possible turbine damage.

IV. Alternate examination: This valve will be manually partial stroked using valve operator handwheel on a refueling frequency and full stroked exercised during concurrent Unit 1 and Unit 2 cold shutdowns.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 30

I. Component for which relief is requested:

(a) Name(s) and Number(s): Core Flood Tanks (CFTs) "A" and "B" Inlet Checks.

1N-129, 131

2N-129, 131

3N-129, 131

Drawing Number/Coordinates: OFD-127B-1.2/J-7, G-7
OFD-127B-2.2/J-7, G-7
OFD-127B-3.2/J-7, G-7

(b) Function: These valves normally open to allow make-up to the CFTs and close to isolate the CFTs. In an emergency they close or remain closed to isolate containment.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Stroking these valves closed can only be done by leak rate test; therefore, verifying these valves are closed at power or cold shutdown would require excessive manpower, cause excessive exposure and generate excessive liquid waste.

IV. Alternate examination: These valves are verified closed by leak rate testing during refueling outages.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 31

I. Component for which relief is requested:

(a) Name(s) and Number(s): Steam Generators Emergency Header Check.

1FDW-345

2FDW-345

3FDW-345

Drawing Number/Coordinates: OFD-121D-1.1/K-12
OFD-121D-2.1/K-12
OFD-121D-3.1/K-13

(b) 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 emergency feedwater nozzles.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves

III. Basis for requesting 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.

IV. Alternate examination: These valves will be disassembled at refueling to verify closure. The positions on check valve disassembly in NRC Generic Letter 89-04 will be followed. Disassembly frequencies may be extended if justified by an evaluation of valve history and performed disassemblies. These valves will be full stroked open at refueling.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 32

I. Component for which relief is requested:

(a) Name(s) and Number(s): LDST Outlet Check Valve.

1HP-97

2HP-97

3HP-97

Drawing Number/Coordinates: OFD-101A-1.2/D-12
OFD-101A-2.2/D-12
OFD-101A-3.2/D-12

(b) Function: These valves are open during normal operation. They prevent backflow from HPI pump suction to the from the RCS during LPI to HPI "Piggyback" operation.

(c) ISI Class/Duke Class: C/C

(d) IWV-2000 Valve Category: A/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3420 Valve Leak Rate Test and IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: These valves close during LPI to HPI "Piggyback" operation to prevent filling the LDST. "Piggyback" mode operation can only be fully tested during refueling outages due to the possibility of RCS overpressurization. Leakage rate can only be measured using Pressurizer level change over time.

IV. Alternate examination: These valves will be verified closed at each refueling outage by measuring Pressurizer level change over time.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 33

I. Component for which relief is requested:

(a) Name(s) and Number(s): LDST Outlet Check Valve.

1HP-189, 364

2HP-189, 364

3HP-189, 364

Drawing Number/Coordinates: OFD-101A-1.2/F6, F7
OFD-101A-2.2/F5, F7
OFD-101A-3.2/F5, F8

(b) Function: These valves open to pass flow from HPI Pump minimum recirculation to the suction of the LPI Pumps during LPI to HPI "Piggyback" operation.

(c) ISI Class/Duke Class: C/C

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: No flow instrumentation exists to monitor flow through these valves.

IV. Alternate examination: These valves will be disassembled at refueling. The positions on check valve disassembly in NRC Generic Letter 89-04 will be followed. Disassembly frequencies may be extended if justified by an evaluation of valve history and performed disassemblies.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 34

I. Component for which relief is requested:

(a) Name(s) and Number(s): HPI Pump Minimum Recirculation Stop Checks

1HP-248, 250, 252

2HP-248, 250, 252

3HP-248, 250, 252

Drawing Number/Coordinates: OFD-101A-1.3/L-10, I-9, E-9

OFD-101A-2.3/L-10, I-9, E-9

OFD-101A-3.3/H-9, I-9, F-8

(b) Function: These stop check valves open to pass HPI Pump minimum recirculation flow.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: B/C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: No flow instrumentation exists to measure pump recirculation flow.

IV. Alternate examination: These valves will be sample disassembled at refueling. The positions on check valve disassembly in NRC Generic Letter 89-04 will be followed. Disassembly frequencies may be extended if justified by an evaluation of valve history and performed disassemblies.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Request # 35

I. Component for which relief is requested:

(a) Name(s) and Number(s): BWST to LPI/RBS Suction
3LP-29, 30

Drawing Number/Coordinates: OFD-102A-3.1/E-7, C-6

(b) Function: These check valves open during an emergency to supply borated water from the BWST to LPI and RBS systems. These valves must close in order to prevent backflow to the BWST when LP-21 or LP-22 fail to close.

(c) ISI Class/Duke Class: B/BC

(d) IWV-2000 Valve Category: C

II. Reference Code requirement which has been determined to be impractical:

IWV-3520 Tests for Check Valves.

III. Basis for requesting relief: Full closure of these valves cannot be determined. Measuring leakage into the BWST cannot be performed due to the large volume. No isolation valves exist near the valves such that leakage could accurately be measured.

IV. Alternate examination: These valves will be sample disassembled at refueling. The positions on check valve disassembly in NRC Generic Letter 89-04 will be followed. Disassembly frequencies may be extended if justified by an evaluation of valve history and performed disassemblies.

APPENDIX E

VALVE COLD SHUTDOWN JUSTIFICATIONS

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 1

I. Component for which justification is provided:

(a) Name(s) and Number(s): SSF Auxiliary Service Water to "A" OTSG

SSF-1CCW-269

SSF-2CCW-269

SSF-3CCW-269

Drawing Number/Coordinates: OFD-121D-1.1/G-13
OFD-121D-2.1/G-13
OFD-121D-3.1/G-13

(b) Function: In an SSF emergency these valves can be throttled open from SSF Control Room to allow Auxiliary Feedwater from several sources to feed the "A" Steam Generator.

(c) ISI Class/Duke Class: C/B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Failure of these valves during Exercise Testing at Power Operation would result in Auxiliary Feedwater Injection being distributed to both the "A" and "B" Steam Generators.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 2

I. Component for which justification is provided:

(a) Name(s) and Number(s): RC Makeup Pump to RCP Seals

SSF-1HP-399, 400, 401, 402

SSF-2HP-399, 400, 401, 402

SSF-3HP-399, 400, 401, 402

Drawing Number/Coordinates: OFD-101A-1.5/G-14, H-14, F-14, F-14
OFD-101A-2.5/H-13, G-13, F-13, F-13
OFD-101A-3.5/H-13, G-14, F-14, F-14

(b) Function: In an SSF Emergency these valves open to allow flow from the RC Makeup System to the RC Pump Seal Supply.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Justification for Cold Shutdown Testing:

Any exercise testing of these valves at Power Operation would result in injecting Spent Fuel Pool Water into the RC Pump Seals. This could result in Power Transients, Uncontrolled Reactivity Changes, Reactor Trips or Extensive Cleanup Requirements, particularly near the end of cycle.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 3

I. Component for which justification is provided:

(a) Name(s) and Number(s): Letdown Isolation

1HP-5
2HP-5
3HP-5

Drawing Number/Coordinates: OFD-101A-1.1/K-8
OFD-101A-2.1/K-8
OFD-101A-3.1/K-8

(b) Function: Provides penetration isolation for the letdown coolers

(c) ISI Class/Duke Class: B/C

(d) IWV-2000 Valve Category: A

II. Justification for Cold Shutdown Testing:

Exercising these valves at power operation would cause the loss of volume and chemistry control.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 4

I. Component for which justification is provided:

(a) Name(s) and Number(s): RCP Seal Return Block

1HP-21

2HP-21

3HP-21

Drawing Number/Coordinates: OFD-101A-1.1/E-7

OFD-101A-2.1/E-8

OFD-101A-3.1/E-8

(b) Function: Penetration isolation for the RCP seal return lines.

(c) ISI Class/Duke Class: B/C

(d) IWV-2000 Valve Category: A

II. Justification for Cold Shutdown Testing:

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.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 5

I. Component for which justification is provided:

(a) Name(s) and Number(s): RC Loop "A" Injection

1HP-26

2HP-26

3HP-26

Drawing Number/Coordinates: OFD-101A-1.4/I-7

OFD-101A-2.4/J-7

OFD-101A-3.4/J-6

(b) Function: In an emergency these valves open for HPI pump "A" flow.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Failure of these valves during exercise testing at power operation would result in the loss of primary pressurizer level control, and possible reactor trip.

OCONEE NUCLEAR STATION
Third Ten Year Interval
Justification # 6

I. Component for which justification is provided:

(a) Name(s) and Number(s): RC Return Block
1LP-1, 2
2LP-1, 2
3LP-1, 2

Drawing Number/Coordinates: OFD-102A-1.1/H-2, H-2
OFD-102A-2.1/H-2, H-2
OFD-102A-3.1/H-2, H-3

(b) Function: Decay heat removal line isolation valves.

(c) ISI Class/Duke Class: A/A or B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

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.

These valves are not considered Category "A" since LP-25 (Relief Valve) is connected outside of LP-1 and LP-2. The setpoint for LP-25 is 200 PSIG. Should LP-1 and LP-2 leak significantly, LP-25 will open and raise the sump level. When the leak is greater than Technical Specifications allow, the reactor would be shut down for maintenance.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 7

I. Component for which justification is provided:

(a) Name(s) and Number(s): "B" or "A" LPI Header Check

1LP-47, 48

2LP-47, 48

3LP-47, 48

Drawing Number/Coordinates: OFD-102A-1.2/E-14, K-14

OFD-102A-2.2/E-14, K-14

OFD-102A-3.2/E-14, K-14

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

(c) ISI Class/Duke Class: A/A

(d) IWV-2000 Valve Category: A/C

II. Justification for Cold Shutdown Testing:

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

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 8

I. Component for which justification is provided:

(a) Name(s) and Number(s): Post LOCA Boron Dilution to Emerg. Sump

1LP-103, 104

2LP-103, 104

3LP-103, 104

Drawing Number/Coordinates: OFD-102A-1.1/H-2, G-2

OFD-102A-2.1/G-2, F-2

OFD-102A-3.1/G-2, G-2

(b) Function: Post-LOCA boron dilution line isolation valves.

(c) ISI Class/Duke Class: A/A

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

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.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 9

I. Component for which justification is provided:

(a) Name(s) and Number(s): Post LOCA Boron Precipitation to LPI Suction
1LP-105

Drawing Number/Coordinates: OFD-102A-1.1/H-2

(b) Function: Back-up to boron dilution flow path. In addition, this valve in the closed position will allow proper line-up for decay heat removal during shutdown.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

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

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 10

I. Component for which justification is provided:

- (a) Name(s) and Number(s): OTSG Startup Control,
OTSG Normal Startup Header Block

1FDW-33, 35, 42, 44

2FDW-33, 35, 42, 44

3FDW-33, 35, 42, 44

Drawing Number/Coordinates: OFD-121B-1.3/J-6, L-7, E-6, F-7

OFD-121B-2.3/J-5, K-7, E-5, F-7

OFD-121B-3.3/J-6, K-7, E-6, F-7

- (b) Function: Steam generator startup block, startup control, and normal startup header valves.

- (c) ISI Class/Duke Class: C/F

- (d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

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 flow rate transient which could cause a reactor trip.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 11

I. Component for which justification is provided:

(a) Name(s) and Number(s): Turbine Stop Valve.

1MS-102, 103, 104, 105

2MS-102, 103, 104, 105

3MS-102, 103, 104, 105

Drawing Number/Coordinates: OFD-122B-1.1/J-3, J-4, J-4, J-5
OFD-122B-2.1/J-3, J-4, J-4, J-5
OFD-122B-3.1/J-3, J-4, J-4, J-5

(b) Function: Turbine stop valves.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

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.

These valves are partial-stroked quarterly, and full-stroked and timed at cold shutdown.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 12

I. Component for which justification is provided:

(a) Name(s) and Number(s): CC Return Penetration Outside Block.

1CC-8

2CC-8

3CC-8

Drawing Number/Coordinates: OFD-144A-1.2/D-14

OFD-144A-2.2/D-13

OFD-144A-3.2/D-13

(b) Function: Component cooling system return line penetration isolation.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: A

II. Justification for Cold Shutdown Testing:

Exercising these valves during power operation would remove cooling water to the control rod drive mechanism and to the reactor coolant pumps, resulting in damage to thermal barriers and pump seal failure. In addition, closing these valves would cause over heating of the letdown fluid which could cause isolation of the letdown flow which could cause loss of pressurizer level control.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 13

I. Component for which justification is provided:

(a) Name(s) and Number(s): "A" or "B" LP Injection.

1LP-17, 18

2LP-17, 18

3LP-17, 18

Drawing Number/Coordinates: OFD-102A-1.2/K-13, E-13

OFD-102A-2.2/K-12, E-13

OFD-102A-3.2/K-13, E-13

(b) Function: Low pressure injection line isolation valves.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

In response to an NRC concern, these valves will not be exercised at power since, in the event of gross failure of both check valves downstream from these valves, opening valve LP-17 or LP-18 could result in rupture of the low pressure piping upstream.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 14

I. Component for which justification is provided:

(a) Name(s) and Number(s): RC Makeup Pump to RCP Seals Block.

SSF-1HP-398

SSF-2HP-398

SSF-3HP-398

Drawing Number/Coordinates: OFD-101A-1.5/F-11
OFD-101A-2.5/F-12
OFD-101A-3.5/F-12

(b) Function: These valves normally prevent Spent Fuel Pool Flow from the RC Makeup System to the RC Pump Seals. In and SSF emergency, they open on command from the SSF to allow the RC Makeup System to supply RC Pump Seal Supply.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Failure of these valves during Exercise Testing at Power Operation would result in injecting Spent Fuel Pool Water into the RC Pump Seals at the next running of the RC Makeup Pump. This could result in Power Transients, Uncontrolled Reactivity Changes, Reactor Trips or Extensive Cleanup Requirements, particularly near the end of the cycle.

OCONEE NUCLEAR STATION
Third Ten Year Interval
Justification # 15

I. Component for which justification is provided:

(a) Name(s) and Number(s): Letdown to Spent Fuel Vent.

SSF-1HP-426

SSF-2HP-426

SSF-3HP-426

Drawing Number/Coordinates: OFD-101A-1.5/J-10
OFD-101A-2.5/K-9
OFD-101A-3.5/K-9

(b) Function: These valves normally prevent flow from the Pressurizer to the Spent Fuel Pool. In an SSF emergency, they allow Letdown Control of the Pressurizer Level.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: A

II. Justification for Cold Shutdown Testing:

Failure of these valves during Exercise Testing at Power Operation would result in a small loss of reactor coolant to the Spent Fuel Pool the next time HP-428 is exercised.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 16

I. Component for which justification is provided:

(a) Name(s) and Number(s): SG Inlet Block On Emergency Header.

SSF-1FDW-347

SSF-2FDW-347

SSF-3FDW-347

Drawing Number/Coordinates: OFD-121D-1.1/D-13
OFD-121D-2.1/D-13
OFD-121D-3.1/D-13

(b) Function: In an SSF emergency, these valve can be throttled from SSF to control the Auxiliary Feedwater flow to the "B" Steam Generator to bring and maintain the unit in hot shutdown.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Failure of these valves during Exercise Testing at Power Operation would result in blocking Auxiliary Feedwater from the "B" Steam Generator.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 17

I. Component for which justification is provided:

(a) Name(s) and Number(s): RCP Coolers Supply or Outlet.

1LPSW-6

2LPSW-6

3LPSW-6

Drawing Number/Coordinates: OFD-124B-1.4/L-4
OFD-124B-2.4/L-2
OFD-124B-3.4/L-4

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

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

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.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 18

I. Component for which justification is provided:

(a) Name(s) and Number(s): RCP Coolers Supply or Outlet.

1LPSW-15
2LPSW-15
3LPSW-15

Drawing Number/Coordinates: OFD-124B-1.4/G-14
OFD-124B-2.4/G-14
OFD-124B-3.4/G-14

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

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: A

II. Justification for Cold Shutdown Testing:

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.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 19

I. Component for which justification is provided:

(a) Name(s) and Number(s): Power Operated Relief Valve (PORV).

1RC-66

2RC-66

3RC-66

Drawing Number/Coordinates: OFD-100A-1.2/K-8
OFD-100A-2.2/K-8
OFD-100A-3.2/K-8

(b) Function: In event of RCS overpressurization, these valves (PORV) along with code relief are to open and relieve the excess pressure to the quench tank.

(c) ISI Class/Duke Class: A/A

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Failure of these valves during exercise testing at power operation would require the block valve (RC-4) to remain closed, thereby eliminating the relief capabilities of these valves.

Actual valve position is not directly indicated (only pilot valve position).

Operation will be verified by observation of flow, therefore operation will not be timed.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 20

I. Component for which justification is provided:

(a) Name(s) and Number(s): TDEFDWP Suction from Hotwell.

1C-391

2C-391

3C-391

Drawing Number/Coordinates: OFD-121A-1.8/J-11

OFD-121A-2.8/J-11

OFD-121A-3.8/J-11

(b) Function: In an emergency, should additional source of feedwater through the Turbine Driven Feedwater Pump be desired, these valves would be opened to align the suction to the Hotwell.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Opening these valves at power would produce a transient, possible loss of vacuum and a reactor trip.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 21

I. Component for which justification is provided:

(a) Name(s) and Number(s): Steam Header "A" or "B" Turbine Bypass,

1MS-17, 26

2MS-17, 26

3MS-17, 26

Drawing Number/Coordinates: OFD-122A-1.2/I-5, D-5

OFD-122A-2.2/I-4, D-4

OFD-122A-3.2/I-4, D-4

(b) Function: Main Steam Bypass Valves

(c) ISI Class/Duke Class: B/F or -/G

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Stroke exercising these valves at power would require closing manual isolation valves which would, with a 900 PSIA differential pressure across them, probably not reopen. This would, in event of a turbine trip, eliminate our bypass capability.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 22

I. Component for which justification is provided:

(a) Name(s) and Number(s): "A" LPI Pump Discharge.

1LP-31

2LP-31

3LP-31

Drawing Number/Coordinates: OFD-102A-1.2/K-5
OFD-102A-2.2/K-5
OFD-102A-3.2/K-5

(b) Function: Prevent back flow to the "A" Low Pressure Injection Pump.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: C

II. Justification for Cold Shutdown Testing:

To test the "A" Low Pressure Injection (LPI) Header at power, it must be recirculated to the BWST. The flow rate which can be obtained under test conditions is approximately 1000 GPM. Since there is no direct, external indication of valve position, there is no means for determining if the valves are full-stroke exercised at this flow rate.

This valve is partial-stroked quarterly and full-stroked at cold shutdown.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 23

I. Component for which justification is provided:

(a) Name(s) and Number(s): "A" or "B" OTSG Main Flow Control Valve.

1FDW-32, 41

2FDW-32, 41

3FDW-32, 41

Drawing Number/Coordinates: OFD-121B-1.3/J-7, D-7

OFD-121B-2.3/J-6, D-5

OFD-121B-3.3/J-7, D-7

(b) Function: These valves are the main control valves to the steam generators.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Exercising these valves at power would disrupt the feedwater flow and level possibly causing a reactor trip.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 24

I. Component for which justification is provided:

(a) Name(s) and Number(s): MDEFWPs Suction from UST.

1C-573

2C-573

3C-573

Drawing Number/Coordinates: OFD-121A-1.8/E-7
OFD-121A-2.8/D-6
OFD-121D-3.8/E-7

(b) Function: These valves are normally locked open to provide suction to the Motor Driven Emergency (MDEFDW) pumps from the Upper Surge Tank (UST). In an emergency following breaking vacuum they can be closed to align the MDEFDW pump suction to the Hotwell.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Stroking these valves at Power Operation would require removing both trains of the MDEFDW system from services.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 25

I. Component for which justification is provided:

(a) Name(s) and Number(s): Main Steam to FDW Turbine: "A" or "B" and
CSAE's

1MS-35, 36

2MS-35, 36

3MS-35, 36

Drawing Number/Coordinates: OFD-122A-1.3/L-3, F-2
OFD-122A-2.3/L-2, F-2
OFD-122A-3.3/L-2, F-2

(b) Function: Following an event these valves will be closed to isolate
the Main Steam Line.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Exercising these valves at power operation could cause a swing of Main
Feedwater flow and possible Reactor runback or trip.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 26

I. Component for which justification is provided:

(a) Name(s) and Number(s): Main steam line to SSRH A1 & A2 or B1 & B2

1MS-76, 79

2MS-76, 79

3MS-76, 79

Drawing Number/Coordinates: OFD-122A-1.1/C-10, I-10
OFD-122A-2.1/I-10, C-10
OFD-122A-3.1/I-10, C-10

(b) Function: Following an event these valves will be closed to isolate the main steam line.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Exercising these valves at power operation would isolate a second stage reheater allowing lower temperature steam to the Turbine.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 27

I. Component for which justification is provided:

(a) Name(s) and Number(s): "B" or "A" Injection Bypass

1HP-409, 410

2HP-409, 410

3HP-409, 410

Drawing Number/Coordinates: OFD-101A-1.4/D-7, H-7
OFD-101A-2.4/E-8, F-8
OFD-101A-3.4/E-8, H-7

(b) Function: In an emergency, open for HPI flow through Cross-Connect to B and A Loops respectively. (Bypass for HP-27 and HP-26).

(c) ISI Class/Duke Class: B/B & BC

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Failure of these valves during exercise testing at power operation would result in the loss of primary pressurizer level control and possibly a reactor trip. The exercising of HP-409 would also cause a thermal transient (AOTC #22A) on the B Loop.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 28

I. Component for which justification is provided:

(a) Name(s) and Number(s): "A" & "B" HPI Suction From BWST

1HP-24, 25

2HP-24, 25

3HP-24, 25

Drawing Number/Coordinates: OFD-101A-1.3/I-3, F-3
OFD-101A-2.3/I-3, F-3
OFD-101A-3.3/I-2, F-3

(b) Function: HP-24, and HP-25 open on ES to align pump suction to the BWST.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

In order to test these valves, an HPI pump suction would be isolated. In event of Engineered Safeguards actuation, the isolated pump would start with no water aligned to its suction. To prevent pump damage would required opening breakers to HPI pumps.

OCONEE NUCLEAR STATION
Third Ten Year Interval
Justification # 29

I. Component for which justification is provided:

(a) Name(s) and Number(s): EFDW to OTSG "A" or "B"

1FDW-315, 316
2FDW-315, 316
3FDW-315, 316

Drawing Number/Coordinates: OFD-121D-1.1
OFD-121D-2.1
OFD-121D-3.1

(b) Function: These valves open on loss of main feedwater to allow emergency feedwater to flow into the OTSG's.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

To consistently stroke these valves requires lifting leads and opening links. Performing this test at power puts the unit at risk for a Emergency Feedwater actuation, and possible unit trip.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 30

I. Component for which justification is provided:

(a) Name(s) and Number(s): MDEFWPs Suction From UST Check

1C-572

2C-572

3C-572

Drawing Number/Coordinates: OFD-121A-1.8/E7
OFD-121A-2.8/E6
OFD-121A-3.8/E7

(b) Function: These valves open to allow the motor driven emergency feedwater pumps to take suction from the Upper Surge Tank.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: C

II. Justification for Cold Shutdown Testing:

MDEFWPs have to be operated simultaneously in order to full stroke these valves. Both MDEFWPs should not be taken out of service for testing during unit operation. These valves are partial stroked quarterly.

OCONEE NUCLEAR STATION
Third Ten Year Interval
Justification # 31

I. Component for which justification is provided:

(a) Name(s) and Number(s): BWST Outlet Isolation Valve

1LP-28

2LP-28

3LP-28

Drawing Number/Coordinates: OFD-102A-1.1/H10
OFD-102A-2.1/H10
OFD-102A-3.1/H10

(b) Function: Normally locked open. In the event LP-21 or LP-22 fail to close when required or the BWST is damaged, LP-28 would be closed to prevent leakage back to the BWST.

(c) ISI Class/Duke Class: B/C

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Closing these valves at power would isolate the suction of LPI, RBS and HPI systems from their emergency source of borated water during power operation making each system inoperable.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 32

I. Component for which justification is provided:

(a) Name(s) and Number(s): Letdown Line to LPI Suction Block

1HP-363

2HP-363

3HP-363

Drawing Number/Coordinates: OFD-101A-1.2/F7
OFD-101A-2.2/F7
OFD-101A-3.2/F7

(b) Function: Normally closed. In "piggyback" mode of operation, these valves are opened to allow HPI pump recirculation flow to return to LPI pump suction to prevent overpressurizing the Letdown Storage Tank.

(c) ISI Class/Duke Class: C/C

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing: .

Opening these valves at power would divert HPI Letdown flow to the suction of the LPI pumps. Flow to the LPI pump suction could increase radiation levels in LPI Pump Room or Hatch areas. Failure of these valves to close at power could create a loss of inventory to the LPI system.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 33

I. Component for which justification is provided:

(a) Name(s) and Number(s): Core Flood Tanks "A" and "B" Discharge
Isolation Valves

1CF-1, 2

2CF-1, 2

3CF-1, 2

Drawing Number/Coordinates: OFD-102A-1.3/F10, F6
OFD-102A-2.3/E10, E6
OFD-102A-3.3/F10, F6

(b) Function: Isolates Core Flood Tank Discharge.

(c) ISI Class/Duke Class: B/B

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

These valves and associated electrical breakers are tagged open when RCS is above 800 psig per ONS Technical Specifications.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 34

I. Component for which justification is provided:

(a) Name(s) and Number(s): Unit 3 Main Turbine Oil Cooler Supply

3LPSW-45

Drawing Number/Coordinates: OFD-124A-3.1/E10

(b) Function: Isolates main turbine oil tank cooling water supply line from LPSW header.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Failure of this valve at power would interrupt cooling water to main turbine oil tank. This would increase turbine oil temperature which could lead to high vibrations, turbine trip and possible turbine damage.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 35

I. Component for which justification is provided:

(a) Name(s) and Number(s): Reactor Coolant Pump (RCP) Seal Return

1HP-20

2HP-20

3HP-20

Drawing Number/Coordinates: OFD-101A-1.1/F-6
OFD-101A-2.1/E-6
OFD-101A-3.1/E-6

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

(c) ISI Class/Duke Class: C/B

(d) IWV-2000 Valve Category: A

II. Justification for Cold Shutdown Testing:

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.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 36

I. Component for which justification is provided:

(a) Name(s) and Number(s): Hotwell Normal and Emergency Make-up Control Valves

1C-176, 187, 192

2C-176, 187, 192

3C-176, 187, 192

Drawing Number/Coordinates: OFD-121A-1.8/I7, G7, J7
OFD-121A-2.8/I7, G7, J7
OFD-121A-3.8/I7, G7, J7

(b) Function: Controls minimum level of Hotwell through make-up from the Upper Surge Tank under normal and emergency conditions.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

Testing of these valves requires isolating the valve and removing the valve control system from service. Failure of these valves during testing or on return to service could result in the loss of make-up control to the hotwell. Low hotwell level could lead to condensate system trip and eventual Reactor trip.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 37

I. Component for which justification is provided:

(a) Name(s) and Number(s): Pressurizer Spray Control Valve

1RC-1

2RC-1

3RC-1

Drawing Number/Coordinates: OFD-100A-1.2/H10
OFD-100A-2.2/H10
OFD-100A-3.2/H10

(b) Function: Controls Pressurizer spray for Pressurizer pressure control either automatically or manually.

(c) ISI Class/Duke Class: C/F

(d) IWV-2000 Valve Category: B

II. Justification for Cold Shutdown Testing:

These valves automatically cycle to maintain Pressurizer pressure during power operation. Manually testing these valves can lead to loss of the ability to return the valve to automatic control. Loss of automatic function could lead to loss of Pressurizer control and eventual Reactor trip.

OCONEE NUCLEAR STATION

Third Ten Year Interval

Justification # 38

I. Component for which justification is provided:

(a) Name(s) and Number(s): CC Return Penetration Inside Block.

1CC-7

2CC-7

3CC-7

Drawing Number/Coordinates: OFD-144A-1.2/D-12
OFD-144A-2.2/D-12
OFD-144A-3.2/D-12

(b) Function: Component cooling system return line penetration isolation.

(c) ISI Class/Duke Class: B/F

(d) IWV-2000 Valve Category: A

II. Justification for Cold Shutdown Testing:

Exercising these valves during power operation would remove cooling water to the control rod drive mechanism and to the reactor coolant pumps, resulting in possible damage to thermal barriers and pump seal failure. In addition, closing these valves would cause over heating of the letdown fluid which could cause isolation of the letdown flow which could cause loss of pressurize level control.

ONS Performance
Pump Program
Retest List

UNIT	DESCRIPTION	PUMP ID	PROCEDURE	FREQUENCY
SSF	SSF AUXILIARY SERVICE WATER PUMP	ON0CCWPU0002	PT/0/A/0400/05	Quarterly
SSF	A SSF HVAC SERVICE WATER PUMP	ON0CCWPU0003	PT/0/A/0400/06	Quarterly
SSF	B SSF HVAC SERVICE WATER PUMP	ON0CCWPU0004	PT/0/A/0400/06	Quarterly
SSF	SSF DIESEL ENGINE SERVICE WATER PUMP	ON0CCWPU0005	PT/0/A/0400/04	Quarterly
SSF	SSF SUBMERSIBLE PUMP	ON0CCWPU0010	PT/0/A/0400/15	Two Year
SSF	SSF DIESEL ENGINE FUEL OIL TRANSFER PUMP	ON0FO PU0005	PT/0/A/0400/03	Quarterly
1	A REACTOR BUILDING SPRAY PUMP	ON1BS PU0001	PT/1/A/0204/07	Quarterly
1	B REACTOR BUILDING SPRAY PUMP	ON1BS PU0002	PT/1/A/0204/07	Quarterly
1	A RC BLEED TRANSFER PUMP	ON1CS PU0003	PT/1/A/0251/17	Quarterly
1	B RC BLEED TRANSFER PUMP	ON1CS PU0004	PT/1/A/0251/17	Quarterly
1	CONCENTRATED BORIC ACID TRANSFER PUMP	ON1CS PU0005	PT/1/A/0251/03	Quarterly
1	A MOTOR DRIVEN EMERGENCY FEEDWATER PUMP	ON1FDWPU0004	PT/1/A/0600/13A	Quarterly
1	B MOTOR DRIVEN EMERGENCY FEEDWATER PUMP	ON1FDWPU0005	PT/1/A/0600/13A	Quarterly
1	TURBINE DRIVEN EMERGENCY FEEDWATER PUMP	ON1FDWPU0006	PT/1/A/0600/12	Quarterly
1	A HIGH PRESSURE INJECTION PUMP	ON1HPIPU0001	PT/1/A/0202/11	Quarterly
1	B HIGH PRESSURE INJECTION PUMP	ON1HPIPU0002	PT/1/A/0202/11	Quarterly
1	C HIGH PRESSURE INJECTION PUMP	ON1HPIPU0003	PT/1/A/0202/11	Quarterly
1	SSF RC MAKEUP PUMP	ON1HPIPU0005	PT/1/A/0400/07	Quarterly
1	A LOW PRESSURE INJECTION PUMP	ON1LPIPU0001	PT/1/A/0203/06	Quarterly
1	B LOW PRESSURE INJECTION PUMP	ON1LPIPU0002	PT/1/A/0203/06	Quarterly
1	C LOW PRESSURE INJECTION PUMP	ON1LPIPU0003	PT/1/A/0203/06	Quarterly
1	A LOW PRESSURE SERVICE WATER PUMP	ON1LSPU0001	PT/1/A/0251/01	Quarterly
1	B LOW PRESSURE SERVICE WATER PUMP	ON1LSPU0002	PT/1/A/0251/01	Quarterly
1	C LOW PRESSURE SERVICE WATER PUMP	ON1LSPU0003	PT/1/A/0251/01	Quarterly
1	A SPENT FUEL POOL COOLING PUMP	ON1SF PU0001	PT/1/A/0251/02	Quarterly
1	B SPENT FUEL POOL COOLING PUMP	ON1SF PU0002	PT/1/A/0251/02	Quarterly
1	C SPENT FUEL POOL COOLING PUMP	ON1SF PU0003	PT/1/A/0251/02	Quarterly
2	AUXILIARY SERVICE WATER PUMP	ON0CCWPU0001	PT/2/A/0251/10	Quarterly
2	A REACTOR BUILDING SPRAY PUMP	ON2BS PU0001	PT/2/A/0204/07	Quarterly
2	B REACTOR BUILDING SPRAY PUMP	ON2BS PU0002	PT/2/A/0204/07	Quarterly
2	A RC BLEED TRANSFER PUMP	ON2CS PU0003	PT/2/A/0251/17	Quarterly
2	B RC BLEED TRANSFER PUMP	ON2CS PU0004	PT/2/A/0251/17	Quarterly
2	CONCENTRATED BORIC ACID TRANSFER PUMP	ON2CS PU0005	PT/2/A/0251/03	Quarterly
2	A MOTOR DRIVEN EMERGENCY FEEDWATER PUMP	ON2FDWPU0004	PT/2/A/0600/13A	Quarterly
2	B MOTOR DRIVEN EMERGENCY FEEDWATER PUMP	ON2FDWPU0005	PT/2/A/0600/13A	Quarterly
2	TURBINE DRIVEN EMERGENCY FEEDWATER PUMP	ON2FDWPU0006	PT/2/A/0600/12	Quarterly
2	A HIGH PRESSURE INJECTION PUMP	ON2HPIPU0001	PT/2/A/0202/11	Quarterly
2	B HIGH PRESSURE INJECTION PUMP	ON2HPIPU0002	PT/2/A/0202/11	Quarterly
2	C HIGH PRESSURE INJECTION PUMP	ON2HPIPU0003	PT/2/A/0202/11	Quarterly
2	SSF RC MAKEUP PUMP	ON2HPIPU0005	PT/2/A/0400/07	Quarterly
2	A LOW PRESSURE INJECTION PUMP	ON2LPIPU0001	PT/2/A/0203/06A	Quarterly
2	B LOW PRESSURE INJECTION PUMP	ON2LPIPU0002	PT/2/A/0203/06A	Quarterly
2	C LOW PRESSURE INJECTION PUMP	ON2LPIPU0003	PT/2/A/0203/06A	Quarterly
3	A REACTOR BUILDING SPRAY PUMP	ON3BS PU0001	PT/3/A/0204/07	Quarterly
3	B REACTOR BUILDING SPRAY PUMP	ON3BS PU0002	PT/3/A/0204/07	Quarterly
3	A RC BLEED TRANSFER PUMP	ON3CS PU0003	PT/3/A/0251/17	Quarterly
3	B RC BLEED TRANSFER PUMP	ON3CS PU0004	PT/3/A/0251/17	Quarterly
3	A CONCENTRATED BORIC ACID TRANSFER PUMP	ON3CS PU0005	PT/3/A/0251/03	Quarterly
3	B CONCENTRATED BORIC ACID TRANSFER PUMP	ON3CS PU0006	PT/3/A/0251/03	Quarterly
3	A MOTOR DRIVEN EMERGENCY FEEDWATER PUMP	ON3FDWPU0004	PT/3/A/0600/13A	Quarterly
3	B MOTOR DRIVEN EMERGENCY FEEDWATER PUMP	ON3FDWPU0005	PT/3/A/0600/13A	Quarterly
3	TURBINE DRIVEN EMERGENCY FEEDWATER PUMP	ON3FDWPU0006	PT/3/A/0600/12	Quarterly
3	A HIGH PRESSURE INJECTION PUMP	ON3HPIPU0001	PT/3/A/0202/11	Quarterly
3	B HIGH PRESSURE INJECTION PUMP	ON3HPIPU0002	PT/3/A/0202/11	Quarterly
3	C HIGH PRESSURE INJECTION PUMP	ON3HPIPU0003	PT/3/A/0202/11	Quarterly
3	SSF RC MAKEUP PUMP	ON3HPIPU0005	PT/3/A/0400/07	Quarterly
3	A LOW PRESSURE INJECTION PUMP	ON3LPIPU0001	PT/3/A/0230/06A	Quarterly
3	B LOW PRESSURE INJECTION PUMP	ON3LPIPU0002	PT/3/A/0230/06A	Quarterly
3	C LOW PRESSURE INJECTION PUMP	ON3LPIPU0003	PT/3/A/0230/06A	Quarterly
3	A LOW PRESSURE SERVICE WATER PUMP	ON3LSPU0001	PT/3/A/0251/01	Quarterly
3	B LOW PRESSURE SERVICE WATER PUMP	ON3LSPU0002	PT/3/A/0251/01	Quarterly
3	A SPENT FUEL POOL COOLING PUMP	ON3SF PU0001	PT/3/A/0251/02	Quarterly
3	B SPENT FUEL POOL COOLING PUMP	ON3SF PU0002	PT/3/A/0251/02	Quarterly
3	C SPENT FUEL POOL COOLING PUMP	ON3SF PU0003	PT/3/A/0251/02	Quarterly

ONS Performance
Valve Program
Retest List

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
1AS-39	OFD-122A-1.4	H6	CK	EFWPT Aux Steam Supply	PERF/MAINT	None	QTR
2AS-39	OFD-122A-2.4	H6	CK	EFWPT Aux Steam Supply Check	PERF/MAINT	None	QTR
3AS-39	OFD-122A-3.4	H6	CK	EFWPT Aux Steam Supply Check	PERF/MAINT	None	QTR
1BA-171	OFD-137A-1.2	H8	MAN	RB Hdr Isolation Valve	PERF	RF	None
2BA-171	OFD-137A-2.2	G8	MAN	RB Hdr Isolation Valve	PERF	RF	None
3BA-171	OFD-137A-3.2	G8	MAN	RB Hdr Isolation Valve	PERF	RF	None
1BA-172	OFD-137A-1.2	H9	MAN	RB Hdr Isolation Valve	PERF	RF	None
2BA-172	OFD-137A-2.2	G9	MAN	RB Hdr Isolation Valve	PERF	RF	None
3BA-172	OFD-137A-3.2	G9	MAN	RB Hdr Isolation Valve	PERF	RF	None
1BS-1	OFD-103A-1.1	J8	EMO	"A" RBS RB Isolation Valve	PERF	None	QTR
2BS-1	OFD-103A-2.1	J8	EMO	"A" RBS RB Isolation Valve	PERF	None	QTR
3BS-1	OFD-103A-3.1	J8	EMO	"A" RBS RB Isolation Valve	PERF	None	QTR
1BS-2	OFD-103A-1.1	E8	EMO	"B" RBS RB Isolation Valve	PERF	None	QTR
2BS-2	OFD-103A-2.1	E8	EMO	"B" RBS RB Isolation Valve	PERF	None	QTR
3BS-2	OFD-103A-3.1	E8	EMO	"B" RBS RB Isolation Valve	PERF	None	QTR
1BS-5	OFD-102A-1.1	E8	CK	"A" Suction from BWST	PERF	None	QTR
2BS-5	OFD-102A-2.1	E8	CK	"A" Suction from BWST CV	PERF	None	QTR
3BS-5	OFD-102A-3.1	F8	CK	"A" Suction from BWST CV	PERF	None	QTR
1BS-6	OFD-102A-1.1	C10	CK	"B" Suction from BWST	PERF	None	QTR
2BS-6	OFD-102A-2.1	C10	CK	"B" Suction from BWST CV	PERF	None	QTR
3BS-6	OFD-102A-3.1	C9	CK	"B" Suction from BWST CV	PERF	None	QTR
1BS-11	OFD-103A-1.1	J6	CK	RBS "A" Pump Discharge	PERF	None	QTR
2BS-11	OFD-103A-2.1	J6	CK	RBS "A" Pump Discharge CV	PERF	None	QTR
3BS-11	OFD-103A-3.1	J6	CK	RBS "A" Pump Discharge CV	PERF	None	QTR
1BS-14	OFD-103A-1.1	J10	CK	"A" Header Penetration	PERF/MAINT	None	RF
2BS-14	OFD-103A-2.1	J10	CK	"A" Header Penetration CV	PERF/MAINT	None	RF
3BS-14	OFD-103A-3.1	J10	CK	"A" Header Penetration CV	PERF/MAINT	None	RF
1BS-16	OFD-103A-1.1	E6	CK	RBS "B" Pump Discharge	PERF	None	QTR
2BS-16	OFD-103A-2.1	E6	CK	RBS "B" Pump Discharge	PERF	None	QTR
3BS-16	OFD-103A-3.1	E6	CK	RBS "B" Pump Discharge CV	PERF	None	QTR
1BS-19	OFD-103A-1.1	E10	CK	"B" Header Penetration	PERF/MAINT	None	RF
2BS-19	OFD-103A-2.1	E10	CK	"B" Header Penetration CV	PERF/MAINT	None	RF
3BS-19	OFD-103A-3.1	E10	CK	"B" Header Penetration CV	PERF/MAINT	None	RF
1C-156	OFD-121A-1.7	I7	EMO	Emerg FDW Pump Normal Supply	PERF	None	S/D
2C-156	OFD-121A-2.7	H7	EMO	Emerg FDW Pump Normal Supply	PERF	None	S/D
3C-156	OFD-121A-3.7	I7	EMO	Emerg FDW Pump Normal Supply	PERF	None	S/D
1C-176	OFD-121A-1.8	I7	AOV	Emergency Make-up to Condenser from UST	PERF	None	S/D
2C-176	OFD-121A-2.8	I7	AOV	Emergency Make-up to Condenser from UST	PERF	None	S/D
3C-176	OFD-121A-3.8	I7	AOV	Emergency Make-up to Condenser from UST	PERF	None	S/D
1C-186	OFD-121A-1.8	G8	MAN	Hotwell Emergency Makeup #1 Control	PERF	None	QTR
2C-186	OFD-121A-2.8	G8	MAN	Hotwell Emergency Makeup #1 Control	PERF	None	QTR
3C-186	OFD-121A-3.8	G8	MAN	Hotwell Emergency Makeup #1 Control Inlet	PERF	None	QTR
1C-187	OFD-121A-1.8	G7	AOV	Emergency Make-up to Condenser from UST	PERF	None	S/D
2C-187	OFD-121A-2.8	G7	AOV	Emergency Make-up to Condenser from UST	PERF	None	S/D
3C-187	OFD-121A-3.8	G7	AOV	Emergency Make-up to Condenser from UST	PERF	None	S/D
1C-192	OFD-121A-1.8	J7	AOV	Normal Make-up to Condenser from UST	PERF	None	S/D
2C-192	OFD-121A-2.8	J7	AOV	Normal Make-up to Condenser from UST	PERF	None	S/D
3C-192	OFD-121A-3.8	J7	AOV	Normal Make-up to Condenser from UST	PERF	None	S/D
1C-391	OFD-121A-1.8	J11	EMO	TDEFDWP Suction from Hotwell	PERF	None	S/D
2C-391	OFD-121A-2.8	J11	EMO	TDEFDWP Suction from Hotwell	PERF	None	S/D
3C-391	OFD-121A-3.8	J11	EMO	TDEFDWP Suction from Hotwell	PERF	None	S/D
1C-572	OFD-121A-1.8	E7	CK	MDEFWPs Suction from UST	PERF/OPS	None	Q/SD
2C-572	OFD-121A-2.8	E6	CK	MDEFWPs Suction from UST Check	PERF/OPS	None	Q/SD
3C-572	OFD-121A-3.8	E7	CK	TDEFWPs Suction from UST Check	PERF/OPS	None	Q/SD
1C-573	OFD-121A-1.8	E7	MAN	MDEFWPs Suction from UST	PERF	None	S/D
2C-573	OFD-121A-2.8	D6	MAN	MDEFWPs Suction from UST	PERF	None	S/D

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
3C-573	OFD-121A-3.8	D7	MAN	MDEFWPs Suction from UST	PERF	None	S/D
1C-850	OFD-121A-1.8	D4	CK	MDEFWP A Suction From Hotwell	PERF	None	RF
2C-850	OFD-121A-2.8	D4	CK	MDEFWP A Suction From Hotwell	PERF	None	RF
3C-850	OFD-121A-3.8	D4	CK	MDEFWP A Suction From Hotwell	PERF	None	RF
1C-852	OFD-121A-1.8	C4	CK	MDEFWP B Suction From Hotwell	PERF	None	RF
2C-852	OFD-121A-2.8	C4	CK	MDEFWP B Suction From Hotwell	PERF	None	RF
3C-852	OFD-121A-3.8	C4	CK	MDEFWP B Suction From Hotwell	PERF	None	RF
1CA-27	OFD-127B-1.2	G7	MAN	Boric Acid Supply to CFT "1A"	PERF	RF	None
2CA-27	OFD-127B-2.2	G7	MAN	Boric Acid Supply to CFT "2A"	PERF	RF	None
3CA-27	OFD-127B-3.2	G7	MAN	Boric Acid Supply to CFT "3A"	PERF	RF	None
1CA-29	OFD-127B-1.2	J7	MAN	Boric Acid Supply to CFT "1B"	PERF	RF	None
2CA-29	OFD-127B-2.2	J7	MAN	Boric Acid Supply to CFT "2B"	PERF	RF	None
3CA-29	OFD-127B-3.2	J7	MAN	Boric Acid Supply to CFT "3B"	PERF	RF	None
1CA-51	OFD-101A-1.2	K5	CK	Lithium Hydroxide to Letdown Line	CHEM	None	S/D
2CA-51	OFD-101A-2.2	K6	CK	Lithium Hydroxide to Letdown Line Check	CHEM	None	S/D
1CC-7	OFD-144A-1.2	D13	EMO	CC from RCP	PERF	RF	S/D
2CC-7	OFD-144A-2.2	D11	EMO	CC from RCP	PERF	RF	S/D
3CC-7	OFD-144A-3.2	D11	EMO	CC from RCP	PERF	RF	S/D
1CC-8	OFD-144A-1.2	D13	PST	CC from RCP	PERF	RF	S/D
2CC-8	OFD-144A-2.2	D13	PST	CC from RCP	PERF	RF	S/D
3CC-8	OFD-144A-3.2	D13	AOV	CC from RCP	PERF	RF	S/D
1CC-20	OFD-144A-1.2	D4	CK	CC to RCP	PERF	RF	RF
2CC-20	OFD-144A-2.2	D3	CK	CC to RCP	PERF	RF	RF
3CC-20	OFD-144A-3.2	D3	CK	CC to RCP	PERF	RF	RF
1CC-21	OFD-144A-1.2	D3	MAN	Supply Hdr Penet 3 Drain	PERF	RF	None
2CC-21	OFD-144A-2.2	C2	MAN	Supply Hdr Penet 3 Drain	PERF	RF	None
3CC-21	OFD-144A-3.2	C2	MAN	Supply Hdr Penet 3 Drain	PERF	RF	None
1CC-22	OFD-144A-1.2	D3	MAN	Supply Hdr Penet 3 Vent	PERF	RF	None
2CC-22	OFD-144A-2.2	D3	MAN	Supply Hdr Penet 3 Vent	PERF	RF	None
3CC-22	OFD-144A-3.2	D3	MAN	Supply Hdr Penet 3 Vent	PERF	RF	None
1CC-23	OFD-144A-1.2	D3	MAN	Supply Hdr Penet 3 PX	PERF	RF	None
2CC-23	OFD-144A-2.2	D3	MAN	Supply Hdr Penet 3 PX	PERF	RF	None
1CC-24	OFD-144A-1.2	D2	CK	CC to RCP	PERF	RF	RF
2CC-24	OFD-144A-2.2	D1	CK	CC to RCP	PERF	RF	RF
3CC-24	OFD-144A-3.2	D1	CK	CC to RCP	PERF	RF	RF
1CC-54	OFD-144A-1.2	C12	MAN	Return Penet 54 Drain	PERF	RF	None
2CC-54	OFD-144A-2.2	C12	MAN	Return Penet 54 Drain	PERF	RF	None
3CC-54	OFD-144A-3.2	C12	MAN	Return Penet 54 Drain	PERF	RF	None
1CC-55	OFD-144A-1.2	D13	MAN	Return Penet 54 Vent	PERF	RF	None
2CC-55	OFD-144A-2.2	D13	MAN	Return Penet 54 Vent	PERF	RF	None
3CC-55	OFD-144A-3.2	D13	MAN	Return Penet 54 Vent	PERF	RF	None
1CC-56	OFD-144A-1.2	D12	MAN	Return Penet 54 PX	PERF	RF	None
2CC-56	OFD-144A-2.2	D12	MAN	Return Penet 54 PX	PERF	RF	None
3CC-56	OFD-144A-3.2	D12	MAN	Return Penet 54 PX	PERF	RF	None
1CC-76	OFD-144A-1.3	H6	CK	CC to CRD Service Structure	PERF	RF	RF
2CC-76	OFD-144A-2.3	H6	CK	CC to CRD Service Structure	PERF	RF	RF
3CC-76	OFD-144A-3.3	H6	CK	CC to CRD Service Structure	PERF	RF	RF
1CC-77	OFD-144A-1.3	H7	CK	CC to CRD Service Structure	PERF	RF	RF
2CC-77	OFD-144A-2.3	H7	CK	CC to CRD Service Structure	PERF	RF	RF
3CC-77	OFD-144A-3.3	H7	CK	CC to CRD Service Structure	PERF	RF	RF
1CC-80	OFD-144A-1.3	I7	MAN	CRD Hdr Penet 44 Vent	PERF	RF	None
2CC-80	OFD-144A-2.3	I7	MAN	CRD Hdr Penet 44 Vent	PERF	RF	None
3CC-80	OFD-144A-3.3	I7	MAN	CRD Hdr Penet 44 Vent	PERF	RF	None
1CC-81	OFD-144A-1.3	I7	MAN	CRD Hdr Penet 44 PX	PERF	RF	None
2CC-81	OFD-144A-2.3	I7	MAN	CRD Hdr Penet 44 PX	PERF	RF	None
1CC-82	OFD-144A-1.3	H7	MAN	CRD Hdr Penet 44 Drain	PERF	RF	None

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD= Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2CC-82	OFD-144A-2.3	H7	MAN	CRD Hdr Penet 44 Drain	PERF	RF	None
3CC-82	OFD-144A-3.3	H7	MAN	CRD Hdr Penet 44 Drain	PERF	RF	None
1CC-97	OFD-144A-1.2	E13	MAN	Return Penet 54 Inside Vent	PERF	RF	None
1CC-98	OFD-144A-1.2	E13	MAN	Return Penet 54 Inside PX	PERF	RF	None
1CC-99	OFD-144A-1.2	D13	MAN	Return Penet 54 Inside Drain	PERF	RF	None
1CCW-1	OFD-133A-1.2	I2	EMO	Condenser "1A1" Emergency Outlet	PERF	None	QTR
1CCW-2	OFD-133A-1.2	I4	EMO	Condenser "1A2" Emergency Outlet	PERF	None	QTR
1CCW-3	OFD-133A-1.2	I6	EMO	Condenser "1B1" Emergency Outlet	PERF	None	QTR
1CCW-4	OFD-133A-1.2	I7	EMO	Condenser "1B2" Emergency Outlet	PERF	None	QTR
1CCW-5	OFD-133A-1.2	I9	EMO	Condenser "1C1" Emergency Outlet	PERF	None	QTR
1CCW-6	OFD-133A-1.2	I11	EMO	Condenser "1C2" Emergency Outlet	PERF	None	QTR
2CCW-7	OFD-133A-2.2	D2	EMO	Unit 2 Condenser Emergency Outlet	PERF	None	QTR
CCW-8	OFD-133A-3.2	B1	EMO	Condenser Disch to Tailrace	PERF	None	QTR
CCW-9	OFD-133A-3.2	D2	EMO	Condenser Discharge to Intake Canal	PERF	None	QTR
1CCW-10	OFD-133A-1.1	J2	EMO	CCW Pump "A" Discharge	PERF	None	QTR
2CCW-10	OFD-133A-2.1	J2	EMO	CCW Pump "A" Discharge	PERF	None	QTR
3CCW-10	OFD-133A-3.1	J2	EMO	CCW Pump "A" Discharge	PERF	None	QTR
1CCW-11	OFD-133A-1.1	J5	EMO	CCW Pump "B" Discharge	PERF	None	QTR
2CCW-11	OFD-133A-2.1	J5	EMO	CCW Pump "B" Discharge	PERF	None	QTR
3CCW-11	OFD-133A-3.1	J5	EMO	CCW Pump "B" Discharge	PERF	None	QTR
1CCW-12	OFD-133A-1.1	J7	EMO	CCW Pump "C" Discharge	PERF	None	QTR
2CCW-12	OFD-133A-2.1	J7	EMO	CCW "C" Discharge	PERF	None	QTR
3CCW-12	OFD-133A-3.1	J7	EMO	CCW "C" Discharge	PERF	None	QTR
1CCW-13	OFD-133A-1.1	J10	EMO	CCW Pump "D" Discharge	PERF	None	QTR
2CCW-13	OFD-133A-2.1	J10	EMO	CCW Pump "D" Discharge	PERF	None	QTR
3CCW-13	OFD-133A-3.1	J10	EMO	CCW Pump "D" Discharge	PERF	None	QTR
3CCW-93	OFD-133A-3.2	D2	EMO	Unit 3 Condenser Emergency Outlet	PERF	None	QTR
CCW-99	OFD-121D-1.2	E2	MAN	Aux Service Water Pump Suction	PERF	None	QTR
CCW-100	OFD-121D-1.2	E4	CK	Aux Service Water Pump Disch Check	PERF	None	QTR
CCW-101	OFD-121D-1.2	E4	MAN	Aux Service Water Pump Disch	PERF	None	None
1CCW-102	OFD-121D-1.2	G11	MAN	Aux Service Water to "1A" SG Stop	PERF	None	None
1CCW-103	OFD-121D-1.2	G11	MAN	Aux Service Water Tell Tale	PERF	None	None
1CCW-104	OFD-121D-1.2	H10	MAN	Aux Service Water to "1A" SG Stop	PERF	None	None
1CCW-105	OFD-121D-1.2	H10	CK	Aux Service Water to "1A" SG Check	PERF	None	None
1CCW-106	OFD-121D-1.2	G12	MAN	Aux Service Water to "1B" SG Stop	PERF	None	None
1CCW-107	OFD-121D-1.2	G13	MAN	Aux Service Water SG "1B" Tell Tale	PERF	None	None
1CCW-108	OFD-121D-1.2	H13	MAN	Aux Service Water to "1B" SG Stop	PERF	None	None
2CCW-110	OFD-121D-1.2	G8	MAN	Aux Service Water to "2A" SG Stop	PERF	None	None
2CCW-111	OFD-121D-1.2	G7	MAN	Aux Service Water SG "2A" Tell Tale	PERF	None	None
2CCW-112	OFD-121D-1.2	H7	MAN	Aux Service Water to "2A" SG Stop	PERF	None	None
2CCW-113	OFD-121D-1.2	H7	CK	Aux Service Water to "2A" SG Check	PERF	None	None
2CCW-114	OFD-121D-1.2	G9	MAN	Aux Service Water to "2B" SG Stop	PERF	None	None
2CCW-115	OFD-121D-1.2	G9	MAN	Aux Service Water SG "2B" Tell Tale	PERF	None	None
2CCW-116	OFD-121D-1.2	H9	MAN	Aux Service Water to "2B" SG Stop	PERF	None	None
2CCW-152	OFD-121D-1.2	I9	CK	Aux Service Water to 2B SG Check	PERF	None	None
CCW-247	OFD-121D-1.2	D4	MAN	Aux Service Water Pump Recirc	PERF	None	QTR
1CCW-268-SSF	OFD-133A-2.5	I13	EMO	SSF Aux Ser Wtr Disch to SG Supply	PERF	None	QTR
2CCW-268-SSF	OFD-133A-2.5	I12	EMO	SSF Aux Ser Wtr Dsch to SG Supply	PERF	None	QTR
3CCW-268-SSF	OFD-133A-2.5	I11	EMO	SSF Aux Ser Wtr Dsch to SG Supply	PERF	None	QTR
1CCW-269-SSF	OFD-121D-1.1	G13	EMO	SSF Aux Ser Water to "A" OTSG	PERF	None	S/D
2CCW-269-SSF	OFD-121D-2.1	G13	EMO	SSF Aux Ser Water to "A" OTSG	PERF	None	S/D
3CCW-269-SSF	OFD-121D-3.1	G13	EMO	SSF Aux Ser Water to "A" OTSG	PERF	None	S/D
CCW-271-SSF	OFD-133A-2.5	I5	CK	HVAC Service Water Pump Disc	PERF	None	QTR
CCW-274-SSF	OFD-133A-2.5	J5	CK	HVAC Service Water Pump Disc	PERF	None	QTR
CCW-284-SSF	OFD-133A-2.5	H5	CK	Diesel Eng Ser Water Pump Disc	PERF	None	QTR
CCW-285-SSF	OFD-133A-2.5	H6	MAN	Diesel Eng Ser Water Pump Disch	PERF	None	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/S/D = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
CCW-286-SSF	OFD-133A-2.5	H8	MAN	Diesel Cooling Jacket Return	PERF	None	QTR
1CCW-287-SSF	OFD-133A-2.5	H13	EMO	SSF Aux Ser Water Disch	PERF	None	QTR
2CCW-287-SSF	OFD-133A-2.5	H12	EMO	SSF Aux Ser Water Disch	PERF	None	QTR
3CCW-287-SSF	OFD-133A-2.5	H11	EMO	SSF Aux Ser Water Disch	PERF	None	QTR
CCW-289-SSF	OFD-133A-2.5	K8	CK	SSF Aux Ser Water Disch	PERF	None	QTR
1CCW-304	OFD-133A-1.2	J14	CK	EFDW Pump Turb Oil Cooler Inlet Check	PERF	None	QTR
2CCW-304	OFD-133A-2.2	K14	CK	EFDW Pump Turb Oil Cooler Inlet Check	PERF	None	QTR
3CCW-304	OFD-133A-3.2	K14	CK	EFDW Pump Turb Oil Cooler Inlet	PERF	None	QTR
1CCW-321	OFD-121D-1.2	I13	CK	Aux Service Water to "1B" SG Check	PERF	None	None
CCW-382	OFD-133A-2.5	L4	MAN	SSF Aux Service Water Air Ejector Block Valve	PERF	None	QTR
CCW-383	OFD-133A-2.5	J12	MAN	SSF Aux Service Water Air Ejector Block Valve	PERF	None	QTR
CCW-384	OFD-133A-2.5	F10	MAN	SSF Diesel Service Water Drain	PERF	None	QTR
1CF-1	OFD-102A-1.3	F10	EMO	"A" CFT Isolation Valve	PERF	None	S/D
2CF-1	OFD-102A-2.3	E10	EMO	"A" CFT Isolation Valve	PERF	None	S/D
3CF-1	OFD-102A-3.3	F10	EMO	"A" CFT Isolation Valve	PERF	None	S/D
1CF-2	OFD-102A-1.3	F6	EMO	"B" CFT Isolation Valve	PERF	None	S/D
2CF-2	OFD-102A-2.3	E6	EMO	"B" CFT Isolation Valve	PERF	None	S/D
3CF-2	OFD-102A-3.3	F6	EMO	"B" CFT Isolation Valve	PERF	None	S/D
1CF-3	OFD-102A-1.3	G9	EMO	"A" CFT Isolation Valve	PERF	ILRT	None
2CF-3	OFD-102A-2.3	G10	EMO	"A" CFT Isolation Valve	PERF	ILRT	None
3CF-3	OFD-102A-3.3	G9	EMO	"A" CFT Isolation Valve	PERF	ILRT	None
1CF-4	OFD-102A-1.3	G5	EMO	"B" CFT Isolation	PERF	ILRT	None
2CF-4	OFD-102A-2.3	G4	EMO	"B" CFT Isolation Valve	PERF	ILRT	None
3CF-4	OFD-102A-3.3	G5	EMO	"B" ICFT Isolation Valve	PERF	ILRT	None
1CF-7	OFD-102A-1.3	G4	MAN	CF Bleed to Waste Holdup Tank	PERF	ILRT	None
2CF-7	OFD-102A-2.3	F3	MAN	CF Bleed to Waste Holdup Tank	PERF	ILRT	None
3CF-7	OFD-102A-3.3	G4	MAN	CF Bleed to Waste Holdup Tank	PERF	ILRT	None
1CF-11	OFD-102A-1.3	E10	CK	"A" CFT Disch Check Valve	PERF/OPS	S/D	S/RF
2CF-11	OFD-102A-2.3	D10	CK	"A" CFT Disch Check valve	PERF/OPS	S/D	S/RF
3CF-11	OFD-102A-3.3	E10	CK	"A" CFT Disch Check valve	PERF/OPS	S/D	S/RF
1CF-12	OFD-102A-1.3	D9	CK	LPI Inlet Header "A" Check Valve	PERF	S/D	S/RF
2CF-12	OFD-102A-2.3	D10	CK	LPI Inlet Header "A" Check Valve	PERF	S/D	S/RF
3CF-12	OFD-102A-3.3	D9	CK	LPI Inlet Header "A" Check Valve	PERF	S/D	S/RF
1CF-13	OFD-102A-1.3	E6	CK	"B" CFT Disch Check Valve	PERF/OPS	S/D	S/RF
2CF-13	OFD-102A-2.3	D6	CK	"B" CFT Disch Check Valve	PERF/OPS	S/D	S/RF
3CF-13	OFD-102A-3.3	E6	CK	"B" CFT Disch Check Valve	PERF/OPS	S/D	S/RF
1CF-14	OFD-102A-1.3	D7	CK	LPI Inlet Header "B" Check Valve	PERF	S/D	S/RF
2CF-14	OFD-102A-2.3	D6	CK	LPI Inlet Header "B" Check Valve	PERF	S/D	S/RF
3CF-14	OFD-102A-3.3	D7	CK	LPI Inlet Header "B" Check Valve	PERF	S/D	S/RF
1CF-19	OFD-102A-1.3	G4	MAN	Sample Block	PERF	ILRT	None
2CF-19	OFD-102A-2.3	G3	MAN	Sample Block	PERF	ILRT	None
3CF-19	OFD-102A-3.3	G4	MAN	Sample Block	PERF	ILRT	None
2CF-34	OFD-102A-2.3	J7	MAN	CFT Vent Isolation	PERF	ILRT	None
3CF-34	OFD-102A-3.3	J7	MAN	CFT Vent Isolation	PERF	ILRT	None
2CF-35	OFD-102A-2.3	I4	MAN	CFT Vent Isolation	PERF	ILRT	None
3CF-35	OFD-102A-3.3	I4	MAN	CFT Vent Penetration Isolation	PERF	ILRT	None
2CF-36	OFD-102A-2.3	I4	MAN	CFT Vent Isolation	PERF	ILRT	None
3CF-36	OFD-102A-3.3	I4	MAN	CFT Vent Penetration Isolation	PERF	ILRT	None
2CF-37	OFD-102A-2.3	J4	MAN	CFT Vent Isolation	PERF	ILRT	None
3CF-37	OFD-102A-3.3	H8	MAN	CFT Vent Isolation	PERF	ILRT	None
1CF-41	OFD-127B-1.2	I8	MAN	Penetration 39 Vent	PERF	RF	None
2CF-41	OFD-127B-2.2	I8	MAN	Penetration 39 Vent	PERF	RF	None
3CF-41	OFD-127B-3.2	I8	MAN	Penetration 39 Vent	PERF	RF	None
1CF-42	OFD-127B-1.2	G11	CK	CF Tank "1A" Inlet Check	PERF	RF	RF
2CF-42	OFD-127B-2.2	G11	CK	CF Tank "2A" Inlet Check	PERF	RF	RF
3CF-42	OFD-127B-3.2	G11	CK	CF Tank "3A" Inlet Check	PERF	RF	RF

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
1CF-43	OFD-127B-1.2	G10	MAN	Penetration 53 Vent	PERF	RF	None
2CF-43	OFD-127B-2.2	G10	MAN	Penetration 53 Vent	PERF	RF	None
3CF-43	OFD-127B-3.2	G10	MAN	Penetration 53 Vent	PERF	RF	None
1CF-44	OFD-127B-1.2	J11	CK	CF Tank "1B" Inlet Check	PERF	RF	RF
2CF-44	OFD-127B-2.2	J11	CK	CF Tank "2B" Inlet Check	PERF	RF	RF
3CF-44	OFD-127B-3.2	J11	CK	CF Tank "3B" Inlet Check	PERF	RF	RF
1CF-45	OFD-127B-1.2	J10	MAN	Penetration 39 Vent	PERF	RF	None
2CF-45	OFD-127B-2.2	J10	MAN	Penetration 39 Vent	PERF	RF	None
3CF-45	OFD-127B-3.2	J10	MAN	Penetration 39 Vent	PERF	RF	None
1CF-47	OFD-127B-1.2	G8	MAN	Penetration 53 Vent	PERF	RF	None
2CF-47	OFD-127B-2.2	G8	MAN	Penetration 53 Vent	PERF	RF	None
3CF-47	OFD-127B-3.2	G8	MAN	Penetration 53 Vent	PERF	RF	None
1CS-5	OFD-107A-1.2	D5	EMO	QT RB Isolation	PERF	RF	QTR
2CS-5	OFD-107A-2.2	D5	EMO	QT RB Isolation	PERF	RF	QTR
3CS-5	OFD-107A-3.2	D5	EMO	QT RB Isolation	PERF	RF	QTR
1CS-6	OFD-107A-1.2	D8	AOV	QT RB Isolation	PERF	RF	QTR
2CS-6	OFD-107A-2.2	D8	AOV	QT RB Isolation	PERF	RF	QTR
3CS-6	OFD-107A-3.2	D8	AOV	QT RB Isolation	PERF	RF	QTR
1CS-11	OFD-107A-1.1	J2	CK	QT Recirc Check Valve	PERF	RF	RF
2CS-11	OFD-107A-2.1	J2	CK	QT Recirc Check Valve	PERF	RF	RF
3CS-11	OFD-107A-3.1	J3	CK	QT Recirc Check Valve	PERF	RF	RF
1CS-12	OFD-107A-1.1	J5	CK	QT Recirc CHwck Valve	PERF	RF	RF
2CS-12	OFD-107A-2.1	J5	CK	QT Recirc Check Valve	PERF	RF	RF
3CS-12	OFD-107A-3.1	J5	CK	QT Recirc CHwck Valve	PERF	RF	RF
1CS-17	OFD-107A-1.1	J3	MAN	QT Return Penet 38 Drain	PERF	RF	None
2CS-17	OFD-107A-2.1	J3	MAN	QT Return Penet 38 Drain	PERF	RF	None
3CS-17	OFD-107A-3.1	J3	MAN	QT Return Penet 38 Drain	PERF	RF	None
1CS-18	OFD-107A-1.1	K3	MAN	QT Return Penet 38 Vent	PERF	RF	None
2CS-18	OFD-107A-2.1	K3	MAN	QT Return Penet 38 Vent	PERF	RF	None
3CS-18	OFD-107A-3.1	K3	MAN	QT Return Penet 38 Vent	PERF	RF	None
1CS-19	OFD-107A-1.1	K4	MAN	QT Return Penet 38 PX	PERF	RF	None
1CS-23	OFD-107A-1.2	C6	MAN	Comp Drn Hdr Penet 29 Drn	PERF	RF	None
2CS-23	OFD-107A-2.2	C6	MAN	Comp Drn Hdr Penet 29 Drn	PERF	RF	None
3CS-23	OFD-107A-3.2	C6	MAN	Comp Drn Hdr Penet 29 Drn	PERF	RF	None
1CS-24	OFD-107A-1.2	D5	MAN	Comp Drn Hdr Penet 29 Vent	PERF	RF	None
2CS-24	OFD-107A-2.2	D5	MAN	Comp Drn Hdr Penet 29 Vent	PERF	RF	None
3CS-24	OFD-107A-3.2	D5	MAN	Comp Drn Hdr Penet 29 Vent	PERF	RF	None
1CS-25	OFD-107A-1.2	D7	MAN	Comp Drn Hdr Penet 29 PX	PERF	RF	None
2CS-25	OFD-107A-2.2	D7	MAN	Comp Drn Hdr Penet 29 PX	PERF	RF	None
3CS-25	OFD-107A-3.2	D7	MAN	Comp Drn Hdr Penet 29 PX	PERF	RF	None
1CS-73	OFD-101A-1.2	J12	CK	CBAT to LDST	OPS	None	QTR
2CS-73	OFD-101A-2.2	J12	CK	CBAST to LDST	OPS	None	QTR
3CS-73	OFD-101A-3.2	J12	CK	CBAST to LDST	OPS	None	QTR
DA-03	OFD-137D-1.1	F3	CK	Receiver Tank A Inlet Check	PERF	None	QTR
DA-08	OFD-137D-1.1	G7	CK	Receiver Tank B Inlet Check	PERF	None	QTR
DA-13	OFD-137D-1.2	F3	CK	Receiver C Inlet Check	PERF	None	QTR
DA-18	OFD-137D-1.2	G72	CK	Receiver Tank D Inlet Check	PERF	None	QTR
DA-25	OFD-137D-1.1	H11	PST	Inlet to Diesel "A" Air Start Motor	OPS	None	QTR
DA-26	OFD-137D-1.1	H12	CK	Engine A - A Air Starter Relay Outlet Check	OPS	None	QTR
DA-27	OFD-137D-1.1	I11	SOV	Engine A-A Air Starter Solenoid	OPS	None	QTR
DA-28	OFD-137D-1.1	I12	CK	Engine A-A Air Starter Solenoid Outlet Check	OPS	None	QTR
DA-31	OFD-137D-1.1	E11	PST	Diesel "A" Air Start Motor "B" Inlet	OPS	None	QTR
DA-32	OFD-137D-1.1	E12	CK	Engine A - B Air Starter Relay Outlet Check	OPS	None	QTR
DA-33	OFD-137D-1.1	E11	SOV	Engine A-B Air Starter Solenoid	OPS	None	QTR
DA-34	OFD-137D-1.1	D12	CK	Engine A - B Air Starter Solenoid Outlet Check	OPS	None	QTR
DA-37	OFD-137D-1.2	H11	PST	Engine B-C Air Starter Relay	OPS	None	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COORD	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
DA-38	OFD-137D-1.2	H12	CK	Engine B - C Air Starter Relay Outlet Check	OPS	None	QTR
DA-39	OFD-137D-1.2	I11	SOV	Engine B-C Air Starter Solenoid	OPS	None	QTR
DA-40	OFD-137D-1.2	I12	CK	Engine B - C Air Starter Solenoid Outlet Check	OPS	None	QTR
DA-43	OFD-137D-1.2	E11	PST	Engine B-D Air Starter Relay	OPS	None	QTR
DA-44	OFD-137D-1.2	E12	CK	Engine B - D Air Starter Relay Outlet Check	OPS	None	QTR
DA-45	OFD-137D-1.2	E11	SOV	Engine B-D Air Starter Solenoid	OPS	None	QTR
DA-46	OFD-137D-1.2	D12	CK	Engine B - D Air Starter Solenoid Outlet Check	OPS	None	QTR
1DW-59	OFD-106E-1.1	H2	MAN	DW to RB	PERF	RF	None
2DW-59	OFD-106E-2.1	H3	MAN	DW to RB	PERF	RF	None
3DW-59	OFD-106E-3.1	H2	MAN	DW to RB	PERF	RF	None
1DW-60	OFD-106E-1.1	H3	MAN	DW to RB	PERF	RF	None
2DW-60	OFD-106E-2.1	H4	MAN	DW to RB	PERF	RF	None
3DW-60	OFD-106E-3.1	H4	MAN	DW to RB	PERF	RF	None
1DW-155	OFD-106E-1.1	E3	CK	DW to RCP Seal Vent	PERF	RF	RF
1DW-156	OFD-106E-1.1	E4	CK	DW to RCP Seal Vent	PERF	RF	RF
1DW-284	OFD-106E-1.1	E3	MAN	Penet 47 Drain	PERF	RF	None
1FDW-31	OFD-121B-1.3	J6	EMO	"A" OTSG Main Block	PERF	None	S/D
2FDW-31	OFD-121B-2.3	J5	EMO	"A" OTSG Main Block	PERF	None	S/D
3FDW-31	OFD-121B-3.3	J6	EMO	"A" OTSG Main Block	PERF	None	S/D
1FDW-32	OFD-121B-1.3	J7	PST	"A" OTSG Main Flow Control Valve	PERF	None	S/D
2FDW-32	OFD-121B-2.3	J6	PST	"A" OTSG Main Flow Control Valve	PERF	None	S/D
3FDW-32	OFD-121B-3.3	J7	PST	"A" OTSG Main Flow Control Valve	PERF	None	S/D
1FDW-33	OFD-121B-1.3	J6	EMO	EFDW to OTSG "A"	PERF	None	S/D
2FDW-33	OFD-121B-2.3	K5	EMO	EFDW to OTSG "A"	PERF	None	S/D
3FDW-33	OFD-121B-3.3	K6	EMO	EFDW to OTSG "A"	PERF	None	S/D
1FDW-35	OFD-121B-1.3	L7	AOV	EFDW to OTSG "A"	PERF	None	S/D
2FDW-35	OFD-121B-2.3	K6	AOV	EFDW to OTSG "A"	PERF	None	S/D
3FDW-35	OFD-121B-3.3	K7	PST	EFDW to OTSG "A"	PERF	None	S/D
1FDW-36	OFD-121B-1.3	K7	EMO	EFDW to OTSG "A"	PERF	None	S/D
2FDW-36	OFD-121B-2.3	K7	EMO	EFDW to OTSG "A"	PERF	None	S/D
3FDW-36	OFD-121B-3.3	K8	EMO	EFDW to OTSG "A"	PERF	None	S/D
1FDW-38	OFD-121B-1.3	L8	EMO	EFDW to OTSG "A"	PERF	None	S/D
2FDW-38	OFD-121B-2.3	L7	EMO	EFDW to OTSG "A"	PERF	None	S/D
3FDW-38	OFD-121B-3.3	L8	EMO	EFDW to OTSG "A"	PERF	None	S/D
1FDW-39	OFD-121D-1.1	J10	CK	EFDW to OTSG "A" Check Valve	OPS/MAINT	None	RF
2FDW-39	OFD-121D-2.1	J10	CK	EFDW to OTSG "A" Check Valve	OPS/MAINT	None	RF
3FDW-39	OFD-121D-3.1	J10	CK	EFDW to OTSG "A" Check Valve	OPS/MAINT	None	RF
1FDW-40	OFD-121B-1.3	D6	EMO	"B" OTSG Main Block	PERF	None	S/D
2FDW-40	OFD-121B-2.3	D4	EMO	"B" OTSG Main Block	PERF	None	S/D
3FDW-40	OFD-121B-3.3	D6	EMO	"B" OTSG MAIN BLOCK	PERF	None	S/D
1FDW-41	OFD-121B-1.3	D7	PST	"B" OTSG Main Flow Control Valve	PERF	None	S/D
2FDW-41	OFD-121B-2.3	D7	PST	"B" OTSG Main Flow Control Valve	PERF	None	S/D
3FDW-41	OFD-121B-3.3	D7	PST	"B" OTSG Main Flow Control Valve	PERF	None	S/D
1FDW-42	OFD-121B-1.3	E6	EMO	EFDW to OTSG "B"	PERF	None	S/D
2FDW-42	OFD-121B-2.3	E5	EMO	EFDW to OTSG "B"	PERF	None	S/D
3FDW-42	OFD-121B-3.3	E6	EMO	EFDW to OTSG "B"	PERF	None	S/D
1FDW-44	OFD-121B-1.3	F7	AOV	EFDW to OTSG "B"	PERF	None	S/D
2FDW-44	OFD-121B-2.3	F7	AOV	EFDW to OTSG "B"	PERF	None	S/D
3FDW-44	OFD-121B-3.3	F7	AOV	EFDW to OTSG "B"	PERF	None	S/D
1FDW-45	OFD-121B-1.3	E7	EMO	EFDW to OTSG "B"	PERF	None	S/D
2FDW-45	OFD-121B-2.3	E7	EMO	EFDW to OTSG "B"	PERF	None	S/D
3FDW-45	OFD-121B-3.3	E8	EMO	EFDW to OTSG "B"	PERF	None	S/D
1FDW-47	OFD-121B-1.3	F8	EMO	EFDW to OTSG "B"	PERF	None	S/D
2FDW-47	OFD-121B-2.3	F8	EMO	EFDW to OTSG "B"	PERF	None	S/D
3FDW-47	OFD-121B-3.3	F8	EMO	EFDW to OTSG "B"	PERF	None	S/D
1FDW-48	OFD-121D-1.1	E10	CK	EFDW to OTSG "B" Check	OPS	None	RF

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD= Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2FDW-48	OFD-121D-2.1	E10	CK	EFDW to OTSG "B" Check	OPS	None	RF
3FDW-48	OFD-121D-3.1	E10	CK	EFDW to OTSG "B" Check	OPS	None	RF
1FDW-93	OFD-121D-1.1	H6	CK	Emerg FDWP Disch Line "A" Check	OPS	None	RF
2FDW-93	OFD-121D-2.1	H6	CK	Emerg FDWP Disch Line "2A" Check	OPS	None	RF
3FDW-93	OFD-121D-3.1	H6	CK	Emerg FDWP Disch Line "3A" Check	OPS	None	RF
1FDW-94	OFD-121D-1.1	H6	MAN	Emerg FDWP Disch Line 1A	PERF	None	QTR
2FDW-94	OFD-121D-2.1	H6	MAN	Emerg FDWP Disch Line 2A	PERF	None	QTR
3FDW-94	OFD-121D-3.1	H6	MAN	Emerg FDWP Disch Line 3A	PERF	None	QTR
1FDW-95	OFD-121D-1.1	F6	CK	Emerg FDWP Disch Check Line 1B	OPS	None	RF
2FDW-95	OFD-121D-2.1	F6	CK	Emerg FDWP Disch Line 2B	OPS	None	RF
3FDW-95	OFD-121D-3.1	F6	CK	Emerg FDWP Disch Check Line 3B	OPS	None	RF
1FDW-96	OFD-121D-1.1	F6	MAN	Emerg FDWP Disch Line 1B	PERF	None	QTR
2FDW-96	OFD-121D-2.1	F6	MAN	Emerg FDWP Disch Line B	PERF	None	QTR
3FDW-96	OFD-121D-3.1	F6	MAN	Emerg FDWP Disch Line B	PERF	None	QTR
1FDW-99	OFD-121D-1.1	H8	CK	Emerg FDW Line "A" Check	OPS	None	RF
2FDW-99	OFD-121D-2.1	H8	CK	Emerg FDW Line "A" Check	OPS	None	RF
3FDW-99	OFD-121D-3.1	H8	CK	Emerg FDW Line "A" Check	OPS	None	RF
1FDW-101	OFD-121D-1.1	F8	CK	Emerg FDW Line "B" Check	OPS	None	RF
2FDW-101	OFD-121D-2.1	F8	CK	Emerg FDW Line "B" Check	OPS	None	RF
3FDW-101	OFD-121D-3.1	F8	CK	Emerg FDW Line "B" Check	OPS	None	RF
1FDW-103	OFD-121B-1.5	K8	EMO	S/G "1A" Shell Drain Block	PERF	RF	None
2FDW-103	OFD-121B-2.5	J9	EMO	S/G "2A" Shell Drain Block	PERF	RF	None
3FDW-103	OFD-121B-3.5	J9	EMO	S/G "3A" Shell Drain Block	PERF	RF	None
1FDW-104	OFD-121B-1.5	C8	EMO	S/G "1B" Shell Drain Block	PERF	RF	None
2FDW-104	OFD-121B-2.5	C9	EMO	S/G "2B" Shell Drain Block	PERF	RF	None
3FDW-104	OFD-121B-3.5	D9	EMO	S/G "3B" Shell Drain Block	PERF	RF	None
1FDW-105	OFD-110A-1.1	F3	EMO	OTSG "A" Sample	PERF	RF	QTR
2FDW-105	OFD-110A-2.1	F3	EMO	OTSG "A" Sample	PERF	RF	QTR
3FDW-105	OFD-110A-3.1	F3	EMO	OTSG "A" Sample	PERF	RF	QTR
1FDW-106	OFD-110A-1.1	F6	PST	OTSG "A" Sample	PERF	RF	QTR
2FDW-106	OFD-110A-2.1	F6	PST	OTSG "A" Sample	PERF	RF	QTR
3FDW-106	OFD-110A-3.1	F6	PST	OTSG "A" Sample	PERF	RF	QTR
1FDW-107	OFD-110A-1.1	D3	EMO	OTSG "B" Sample	PERF	RF	QTR
2FDW-107	OFD-110A-2.1	D3	EMO	OTSG "B" Sample	PERF	RF	QTR
3FDW-107	OFD-110A-3.1	D3	EMO	OTSG "B" Sample	PERF	RF	QTR
1FDW-108	OFD-110A-1.1	D6	PST	OTSG "B" Sample	PERF	RF	QTR
2FDW-108	OFD-110A-2.1	D6	PST	OTSG "B" Sample	PERF	RF	QTR
3FDW-108	OFD-110A-3.1	D6	PST	OTSG "B" Sample	PERF	RF	QTR
1FDW-117	OFD-110A-1.1	F5	MAN	"1A" OTSG Smpl Penet 2 Vent	PERF	RF	None
2FDW-117	OFD-110A-2.1	F5	MAN	"2A" OTSG Smpl Penet 2 Vent	PERF	RF	None
3FDW-117	OFD-110A-3.1	F5	MAN	"3A" OTSG Smpl Penet 2 Vent	PERF	RF	None
1FDW-118	OFD-110A-1.1	F5	MAN	"1A" OTSG Smpl Penet 2 Drain	PERF	RF	None
2FDW-118	OFD-110A-2.1	F5	MAN	"2A" OTSG Smpl Penet 2 Drain	PERF	RF	None
3FDW-118	OFD-110A-3.1	D5	MAN	"3A" OTSG Smpl Penet 2 Drain	PERF	RF	None
1FDW-119	OFD-110A-1.1	F5	MAN	"1A" OTSG Smpl Penet 2 PX	PERF	RF	None
2FDW-119	OFD-110A-2.1	F5	MAN	"2A" OTSG Smpl Penet 2 PX	PERF	RF	None
1FDW-122	OFD-110A-1.1	F6	MAN	"1B" OTSG Smpl Penet 58 Vent	PERF	RF	None
2FDW-122	OFD-110A-2.1	D5	MAN	"2B" Smpl Penet 58 Vent	PERF	RF	None
3FDW-122	OFD-110A-3.1	D5	MAN	"3B" Smpl Penet 58 Vent	PERF	RF	None
1FDW-123	OFD-110A-1.1	C5	MAN	"1B" OTSG Smpl Penet 58 Drain	PERF	RF	None
2FDW-123	OFD-110A-2.1	C5	MAN	"2B" OTSG Smpl Penet 58 Drain	PERF	RF	None
3FDW-123	OFD-110A-3.1	C5	MAN	"3B" OTSG Smpl Penet 58 Drain	PERF	RF	None
1FDW-124	OFD-110A-1.1	D5	MAN	"1B" OTSG Smpl Penet 58 PX	PERF	RF	None
2FDW-124	OFD-110A-2.1	D5	MAN	"2B" OTSG Smpl Penet 58 PX	PERF	RF	None
2FDW-176	OFD-121B-2.5	L8	MAN	Penetration 43 Vent	PERF	RF	None
3FDW-176	OFD-121B-3.5	L8	MAN	Penetration 43 Vent	PERF	RF	None

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2FDW-177	OFD-121B-2.5	C8	MAN	Penetration 4 Vent	PERF	RF	None
3FDW-177	OFD-121B-3.5	C8	MAN	Penetration 4 Vent	PERF	RF	None
1FDW-232	OFD-121D-1.1	K13	CK	OTSG "A" Emergency Hdr. Check	OPS	None	RF
2FDW-232	OFD-121D-2.1	K13	CK	OTSG "A" Emergency Hdr. Check	OPS	None	RF
3FDW-232	OFD-121D-3.1	K13	CK	OTSG "A" Emergency Hdr. Check	OPS	None	RF
1FDW-233	OFD-121D-1.1	D13	CK	OTSG "B" Emergency Hdr. Check	OPS	None	RF
2FDW-233	OFD-121D-2.1	D13	CK	OTSG "B" Emergency Hdr. Check	OPS	None	RF
3FDW-233	OFD-121D-3.1	D13	CK	OTSG "B" Emergency Hdr. Check	OPS	None	RF
1FDW-311	OFD-121D-1.1	J6	CK	EFDW to OTSG "A"	OPS	None	RF
2FDW-311	OFD-121D-2.1	J6	CK	EFDW to OTSG "A"	OPS	None	RF
3FDW-311	OFD-121D-3.1	I6	CK	EFDW to OTSG "A"	OPS	None	RF
1FDW-312	OFD-121D-1.1	E6	CK	EFDW to OTSG "B"	OPS	None	RF
2FDW-312	OFD-121D-2.1	E7	CK	EFDW to OTSG "B"	OPS	None	RF
3FDW-312	OFD-121D-3.1	E6	CK	EFDW to OTSG "B"	OPS	None	RF
1FDW-313	OFD-121D-1.1	H10	MAN	EFPW Line "1A2" Disch to S/G "1A" X-Tie	PERF	None	QTR
2FDW-313	OFD-121D-2.1	I10	MAN	EFPW Line "2A2" Disch to S/G "2A" X-Tie	PERF	None	QTR
3FDW-313	OFD-121D-3.1	H10	MAN	EFPW Line "3A2" Disch to S/G "3A" X-Tie	PERF	None	QTR
1FDW-314	OFD-121D-1.1	F10	MAN	EFPW Line "1B2" Disch to S/G "1B" X-Tie	PERF	None	QTR
2FDW-314	OFD-121D-2.1	F10	MAN	EFPW to Line "2B2" Disch to S/G "2B" X-Tie	PERF	None	QTR
3FDW-314	OFD-121D-3.1	F10	MAN	EFPW to Line "3B2" Disch to S/G "3B" X-Tie	PERF	None	QTR
1FDW-315	OFD-121D-1.1	K10	AOV	EFDW to OTSG "A"	PERF	None	S/D
2FDW-315	OFD-121D-2.1	K10	AOV	EFDW to OTSG "A"	PERF	None	S/D
3FDW-315	OFD-121D-3.1	K10	AOV	EFDW to OTSG "A"	PERF	None	S/D
1FDW-316	OFD-121D-1.1	D10	PST	EFDW to OTSG "B"	PERF	None	S/D
2FDW-316	OFD-121D-2.1	D10	AOV	EFDW to OTSG "B"	PERF	None	S/D
3FDW-316	OFD-121D-3.1	D10	AOV	EFDW to OTSG "B"	PERF	None	S/D
1FDW-317	OFD-121D-1.1	K10	CK	EFDW to OTSG "A"	OPS	None	RF
2FDW-317	OFD-121D-2.1	K10	CK	EFDW to OTSG "B"	OPS	None	RF
3FDW-317	OFD-121D-3.1	K10	CK	EFDW to OTSG "B"	OPS	None	RF
1FDW-318	OFD-121D-1.1	D10	CK	EFDW to OTSG "B"	OPS	None	RF
2FDW-318	OFD-121D-2.1	D10	CK	EFDW to OTSG "A"	OPS	None	RF
3FDW-318	OFD-121D-3.1	D10	CK	EFDW to OTSG "A"	OPS	None	RF
1FDW-329	OFD-121B-1.5	J8	MAN	OTSG DRAIN PENETRATION BLOCK	PERF	RF	None
2FDW-329	OFD-121B-2.5	I8	MAN	OTSG Drain Penetration Block	PERF	RF	None
3FDW-329	OFD-121B-3.5	J8	MAN	OTSG Drain Penetration Block	PERF	RF	None
1FDW-331	OFD-121B-1.5	D8	MAN	OTSG Drain Penetration Block	PERF	RF	None
2FDW-331	OFD-121B-2.5	C8	MAN	OTSG Drain Penetration Block	PERF	RF	None
3FDW-331	OFD-121B-3.5	D8	MAN	OTSG Drain Penetration Block	PERF	RF	None
1FDW-334	OFD-121B-1.5	L6	MAN	OTSG Drain Block	PERF	RF	None
2FDW-334	OFD-121B-2.5	K7	MAN	OTSG Drain Block	PERF	RF	None
3FDW-334	OFD-121B-3.5	L6	MAN	OTSG Drain Block	PERF	RF	None
1FDW-335	OFD-121B-1.5	C6	MAN	OTSG Drain Block	PERF	RF	None
2FDW-335	OFD-121B-2.5	C6	MAN	OTSG Drain Block	PERF	RF	None
3FDW-335	OFD-121B-3.5	C6	MAN	OTSG Drain Block	PERF	RF	None
1FDW-345	OFD-121D-1.1	K12	CK	"1A" SG Emergency Hdr Check	OPS/MAINT	None	RF
2FDW-345	OFD-121D-2.1	K12	CK	"2A" Emergency Hdr Check	OPS/MAINT	None	RF
3FDW-345	OFD-121D-3.1	K13	CK	"3A" SG Emergency Hdr Check	OPS/MAINT	None	RF
1FDW-346	OFD-121D-1.1	D12	CK	"1B" SG Emergency Hdr Check	OPS	None	RF
2FDW-346	OFD-121D-2.1	D12	CK	"2B" SG Emergency Hdr Check	OPS	None	RF
3FDW-346	OFD-121D-3.1	D12	CK	"3B" SG Emergency Hdr Check	OPS	None	RF
1FDW-347-SSF	OFD-121D-1.1	D13	EMO	SSF Aux Ser Water to "B" OTSG	PERF	None	S/D
2FDW-347-SSF	OFD-121D-2.1	D13	EMO	SSF Aux Ser Water to B OTSG	PERF	None	S/D
3FDW-347-SSF	OFD-121D-3.1	D13	EMO	SSF Aux Ser Water to "B" OTSG	PERF	None	S/D
1FDW-368	OFD-121D-1.1	J5	EMO	TDEFWP Disch to SG "1A" Block (Emerg-Emerg Hdr)	PERF	None	QTR
2FDW-368	OFD-121D-2.1	J7	EMO	TDEFWP Disch to SG "2A" Block (Emerg-Emerg Hdr)	PERF	None	QTR
3FDW-368	OFD-121D-3.1	I7	EMO	TDEFWP Disch to SG "3A" Block (Emerg-Emerg Hdr)	PERF	None	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
1FDW-369	OFD-121D-1.1	E6	EMO	TDEFWP Disch to SG "1B" Block (Emerg-Emerg Hdr)	PERF	None	QTR
2FDW-369	OFD-121D-2.1	E6	EMO	TDEFWP Disch to SG "2B" Block (Emerg-Emerg Hdr)	PERF	None	QTR
3FDW-369	OFD-121D-3.1	E7	EMO	TDEFWP Disch to SG "3B" Block (Emerg-Emerg Hdr)	PERF	None	QTR
1FDW-370	OFD-121D-1.1	K3	CK	MDEFWP "A" Min Flow Recirc	OPS	None	RF
2FDW-370	OFD-121D-2.1	K3	CK	MDEFWP "A" Min Flow Recirc	OPS	None	RF
3FDW-370	OFD-121D-3.1	K4	CK	MDEFWP "A" Min Flow Recirc	OPS	None	RF
1FDW-372	OFD-121D-1.1	K7	EMO	MDEFWP "1A" Disch to SG "1A" (Emerg-Emerg Hdr)	PERF	None	QTR
2FDW-372	OFD-121D-2.1	K7	EMO	MDEFWP "2A" Disch to SG "2A" (Emerg-Emerg Hdr)	PERF	None	QTR
3FDW-372	OFD-121D-3.1	K7	EMO	MDEFWP "3A" Disch to SG "3A" (Emerg-Emerg Hdr)	PERF	None	QTR
1FDW-373	OFD-121D-1.1	K7	CK	MDEFW to OTSG "A"	OPS	None	RF
2FDW-373	OFD-121D-2.1	K7	CK	MDEFW to OTSG "A"	OPS	None	RF
3FDW-373	OFD-121D-3.1	K7	CK	MDEFW to OTSG "A"	OPS	None	RF
1FDW-374	OFD-121D-1.1	J6	EMO	MDEFWP "1A" Disch to SG "1A" (Nor-Emerg Hdr)	PERF	None	QTR
2FDW-374	OFD-121D-2.1	K6	EMO	MDEFWP "2A" Disch to SG "2A" (Nor-Emerg Hdr)	PERF	None	QTR
3FDW-374	OFD-121D-3.1	J7	EMO	MDEFWP "3A" Disch to SG "3A" (Nor-Emerg Hdr)	PERF	None	QTR
1FDW-375	OFD-121D-1.1	I6	CK	MDEFWP "1A" Disch Check to SG "1A" (Nor-Emerg Hdr)	OPS	None	RF
2FDW-375	OFD-121D-2.1	J6	CK	MDEFWP "2A" Disch Check to SG "2A" (Nor-Emerg Hdr)	OPS	None	RF
3FDW-375	OFD-121D-3.1	I7	CK	MDEFWP "3A" Disch Check to SG "3A" (Nor-Emerg Hdr)	OPS	None	RF
1FDW-378	OFD-121D-1.1	K3	CK	1A MDEFDW Pump Minimum Recirc Check	PERF	None	QTR
2FDW-378	OFD-121D-2.1	K3	CK	2A MDEFDW Pump Minimum Recirc Check	PERF	None	QTR
3FDW-378	OFD-121D-3.1	D12	CK	3A MDEFDW Pump Minimum Recirc Check	PERF	None	QTR
1FDW-380	OFD-121D-1.1	D3	CK	MDEFWP "B" Min Flow Recirc	OPS	None	RF
2FDW-380	OFD-121D-2.1	D3	CK	MDEFWP "B" Min Flow Recirc	OPS	None	RF
3FDW-380	OFD-121D-3.1	D4	CK	MDEFWP "B" Min Flow Recirc	OPS	None	RF
1FDW-382	OFD-121D-1.1	D7	EMO	MDEFWP "1B" Disch to SG "1B" (Emerg-Emerg Hdr)	PERF	None	QTR
2FDW-382	OFD-121D-2.1	D7	EMO	MDEFWP "2B" Disch to SG "2B" (Emerg-Emerg Hdr)	PERF	None	QTR
3FDW-382	OFD-121D-3.1	D7	EMO	MDEFWP "3B" Disch to SG "3B" (Emerg-Emerg Hdr)	PERF	None	QTR
1FDW-383	OFD-121D-1.1	D7	CK	MDEFW to OTSG "B"	OPS	None	RF
2FDW-383	OFD-121D-2.1	D6	CK	MDEFW to OTSG "B"	OPS	None	RF
3FDW-383	OFD-121D-3.1	D7	CK	MDEFW to OTSG "B"	OPS	None	RF
1FDW-384	OFD-121D-1.1	D6	EMO	MDEFWP "1B" Disch to SG "1B" (Nor-Emerg Hdr)	PERF	None	QTR
2FDW-384	OFD-121D-2.1	D6	EMO	MDEFWP "2B" Disch to SG "2B" (Nor-Emerg Hdr)	PERF	None	QTR
3FDW-384	OFD-121D-3.1	D7	EMO	MDEFWP "3B" Disch to SG "3B" (Nor-Emerg Hdr)	PERF	None	QTR
1FDW-385	OFD-121D-1.1	D6	CK	MDEFWP "1B" Disch Check to SG "1B" (Nor-Emerg Hdr)	OPS	None	RF
2FDW-385	OFD-121D-2.1	D6	CK	MDEFWP "2B" Disch Check to SG "2B" (Nor-Emerg Hdr)	OPS	None	RF
3FDW-385	OFD-121D-3.1	D7	CK	MDEFWP "3B" Disch Check to SG "3B" (Nor-Emerg Hdr)	OPS	None	RF
1FDW-388	OFD-121D-1.1	D3	CK	1B MDEFDW Pump Minimum Recirc Check	PERF	None	QTR
2FDW-388	OFD-121D-2.1	D3	CK	2B MDEFDW Pump Minimum Recirc Check	PERF	None	QTR
3FDW-388	OFD-121D-3.1	D4	CK	3B MDEFDW Pump Minimum Recirc Check	PERF	None	QTR
1FDW-432	OFD-121D-1.1	E10	CK	1B SG Emerg Hdr Check	OPS/MAINT	None	RF
2FDW-432	OFD-121D-2.1	E10	CK	2B SG Emerg Hdr Check (NSM-1632)	OPS/MAINT	None	RF
3FDW-432	OFD-121D-3.1	E10	CK	3B SG Emerg Hdr Check (NSM-1632)	OPS/MAINT	None	RF
1FDW-442	OFD-121D-1.1	D11	CK	EFDW to "B" S/G Outside Check	OPS	None	RF
2FDW-442	OFD-121D-2.1	D11	CK	EFDW to "B" S/G Outside Check	OPS	None	RF
3FDW-442	OFD-121D-3.1	D11	CK	EFDW to "B" S/G Outside Check	OPS	None	RF
FO-50	OFD-135A-1.2	D7	CK	FO Transfer Filter Discharge Check	PERF	None	QTR
FO-78	OFD-135A-1.2	J7	CK	DC Fuel Oil Pump Inlet Check	PERF	None	QTR
FO-79	OFD-135A-1.2	J8	CK	DC Fuel Oil Pump to Filter Bypass Check	PERF	None	QTR
FO-80	OFD-135A-1.2	J9	CK	DC Fuel Oil Pump Outlet to Filter Check	PERF	None	QTR
FO-81	OFD-135A-1.2	I8	CK	Engine Driven Fuel Oil Pump Inlet Check	PERF	None	QTR
FO-82	OFD-135A-1.2	I9	CK	Engine Driven Fuel Oil Pump to Filter Bypass Check	PERF	None	QTR
FO-83	OFD-135A-1.2	J9	CK	Engine Driven Fuel Oil Pump Outlet to Filter Check	PERF	None	QTR
FO-84	OFD-135A-1.2	I10	CK	Engine A Fuel Injection Return Check	PERF	None	QTR
FO-89	OFD-135A-1.2	J11	CK	DC Fuel Oil Pump Inlet Check	PERF	None	QTR
FO-90	OFD-135A-1.2	J12	CK	DC Fuel Oil Pump to Filter Bypass Check	PERF	None	QTR
FO-91	OFD-135A-1.2	J13	CK	DC Fuel Oil Pump Outlet to Filter Check	PERF	None	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
FO-92	OFD-135A-1.2	I12	CK	Engine Driven Fuel Oil Pump Inlet Check	PERF	None	QTR
FO-93	OFD-135A-1.2	I13	CK	Engine Driven Fuel Oil Pump to Filter Bypass Check	PERF	None	QTR
FO-94	OFD-135A-1.2	J13	CK	Engine Driven Fuel Oil Pump Outlet to Filter Check	PERF	None	QTR
FO-95	OFD-135A-1.2	I14	CK	Engine B Fuel Injector Return Check	PERF	None	QTR
1FW-64	OFD-106E-1.1	J2	MAN	FW to RB	PERF	RF	None
2FW-64	OFD-106E-2.1	J3	MAN	FW to RB	PERF	RF	None
3FW-64	OFD-106E-3.1	J3	MAN	FW to RB	PERF	RF	None
1FW-65	OFD-106E-1.1	J4	MAN	FW to RB	PERF	RF	None
2FW-65	OFD-106E-2.1	J6	MAN	FW to RB	PERF	RF	None
3FW-65	OFD-106E-3.1	J4	MAN	FW to RB	PERF	RF	None
1FW-66	OFD-106E-1.1	J3	MAN	RB FW Header Drain (46)	PERF	RF	None
2FW-66	OFD-106E-2.1	J5	MAN	RB FW Header Drain (46)	PERF	RF	None
3FW-66	OFD-106E-3.1	J3	MAN	RB FW Header Drain (46)	PERF	RF	None
1GWD-10	OFD-107A-1.1	L13	MAN	QT Vent Penet 18 Vent	PERF	RF	None
2GWD-10	OFD-107A-2.1	L12	MAN	QT Vent Penet 18 Vent	PERF	RF	None
3GWD-10	OFD-107A-3.1	L12	MAN	QT Vent Penet 18 Vent	PERF	RF	None
1GWD-11	OFD-107A-1.1	L12	MAN	QT Vent Penet 18 Vent	PERF	RF	None
2GWD-11	OFD-107A-2.1	L12	MAN	QT Vent Penet 18 Vent	PERF	RF	None
3GWD-11	OFD-107A-3.1	L12	MAN	QT Vent Penet 18 Vent	PERF	RF	None
1GWD-12	OFD-107A-1.1	J11	EMO	QT Vent	PERF	RF	QTR
2GWD-12	OFD-107A-2.1	J11	EMO	QT Vent	PERF	RF	QTR
3GWD-12	OFD-107A-3.1	J11	EMO	QT Vent	PERF	RF	QTR
1GWD-13	OFD-107A-1.1	K13	AOV	QT Vent	PERF	RF	QTR
2GWD-13	OFD-107A-2.1	K13	AOV	QT Vent	PERF	RF	QTR
3GWD-13	OFD-107A-3.1	K13	AOV	QT Vent	PERF	RF	QTR
1HP-3	OFD-101A-1.1	L5	EMO	"A" LD Cooler Outlet	PERF	RF	QTR
2HP-3	OFD-101A-2.1	L5	EMO	"A" LD Cooler Outlet	PERF	RF	QTR
3HP-3	OFD-101A-3.1	K5	EMO	"A" LD Cooler Outlet	PERF	RF	QTR
1HP-4	OFD-101A-1.1	J5	EMO	"B" LD Cooler Outlet	PERF	RF	QTR
2HP-4	OFD-101A-2.1	J5	EMO	"B" LD Cooler Outlet	PERF	RF	QTR
3HP-4	OFD-101A-3.1	J5	EMO	"B" LD Cooler Outlet	PERF	RF	QTR
1HP-5	OFD-101A-1.1	K8	PST	LD Cooler Outlet	PERF	RF	S/D
2HP-5	OFD-101A-2.1	K8	PST	LD Cooler Outlet	PERF	RF	S/D
3HP-5	OFD-101A-3.1	K8	PST	LD Cooler Outlet	PERF	RF	S/D
1HP-16	OFD-101A-1.2	K7	PST	Makeup to LDST	PERF	None	QTR
2HP-16	OFD-101A-2.2	K8	PST	Makeup to LDST	PERF	None	QTR
3HP-16	OFD-101A-3.2	K8	PST	Makeup to LDST	PERF	None	QTR
1HP-20	OFD-101A-1.1	F5	EMO	RC Pump Seal Return	PERF	RF	S/D
2HP-20	OFD-101A-2.1	E6	EMO	RC Pump Seal Return	PERF	RF	S/D
3HP-20	OFD-101A-3.1	E6	EMO	RC Pump Seal Return	PERF	RF	S/D
1HP-21	OFD-101A-1.1	E7	PST	RC Pump Seal Return	PERF	RF	S/D
2HP-21	OFD-101A-2.1	E8	PST	RC Pump Seal Return	PERF	RF	S/D
3HP-21	OFD-101A-3.1	E7	PST	RC Pump Seal Return	PERF	RF	S/D
1HP-24	OFD-101A-1.3	I3	EMO	"A" HPI Pump Suct from BWST	PERF	None	S/D
2HP-24	OFD-101A-2.3	I3	EMO	"A" HPI Pump Suct from BWST	PERF	None	S/D
3HP-24	OFD-101A-3.3	I2	EMO	"A" HPI Pump Suct from BWST	PERF	None	S/D
1HP-25	OFD-101A-1.3	F3	EMO	"C" HPI Pump Suct from BWST	PERF	None	S/D
2HP-25	OFD-101A-2.3	F3	EMO	"C" HPI Pump Suct from BWST	PERF	None	S/D
3HP-25	OFD-101A-3.3	F3	EMO	"C" HPI Pump Suct from BWST	PERF	None	S/D
1HP-26	OFD-101A-1.4	J7	EMO	"A" Loop Injection	PERF	None	S/D
2HP-26	OFD-101A-2.4	J7	EMO	"A" Loop Injection	PERF	None	S/D
3HP-26	OFD-101A-3.4	J6	EMO	"A" Loop Injection	PERF	None	S/D
1HP-27	OFD-101A-1.4	D7	EMO	"B" Loop Injection	PERF	None	QTR
2HP-27	OFD-101A-2.4	D7	EMO	"B" Loop Injection	PERF	None	QTR
3HP-27	OFD-101A-3.4	D7	EMO	"B" Loop Injection	PERF	None	QTR
1HP-36	OFD-101A-1.1	K7	MAN	Letdown Penet 6 Vent	PERF	RF	None

ILRT = Tested only during ILRT outages

RF = Tested only during refuelling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2HP-36	OFD-101A-2.1	K7	MAN	Letdown Penet 6 Vent	PERF	RF	None
3HP-36	OFD-101A-3.1	K7	MAN	Letdown Penet 6 Vent	PERF	RF	None
1HP-37	OFD-101A-1.1	K7	MAN	Letdown Penet 6 Drain	PERF	RF	None
2HP-37	OFD-101A-2.1	K7	MAN	Letdown Penet 6 Drain	PERF	RF	None
3HP-37	OFD-101A-3.1	K7	MAN	Letdown Penet 6 Drain	PERF	RF	None
1HP-38	OFD-101A-1.1	K7	MAN	Letdown Penet 6 PX	PERF	RF	None
1HP-68	OFD-101A-1.1	F6	MAN	Seal Return Penet 7 Vent	PERF	RF	None
2HP-68	OFD-101A-2.1	E7	MAN	Seal Return Penet 7 Vent	PERF	RF	None
3HP-68	OFD-101A-3.1	E7	MAN	Seal Return Penet 7 Vent	PERF	RF	None
1HP-69	OFD-101A-1.1	E6	MAN	Seal Return Penet 7 Drain	PERF	RF	None
2HP-69	OFD-101A-2.1	E7	MAN	Seal Return Penet 7 Drain	PERF	RF	None
3HP-69	OFD-101A-3.1	E7	MAN	Seal Return Penet 7 Drain	PERF	RF	None
1HP-70	OFD-101A-1.1	E6	MAN	Seal Return Penet 7 PX	PERF	RF	None
1HP-78	OFD-101A-1.2	F6	CK	LDST Inlet Check	PERF	None	QTR
2HP-78	OFD-101A-2.2	F6	CK	LDST Inlet Check	PERF	None	QTR
3HP-78	OFD-101A-3.2	F6	CK	LDST Inlet Check	PERF	None	QTR
2HP-83	OFD-101A-2.1	K6	MAN	Letdown Line Penet 6 Vent	PERF	RF	None
1HP-97	OFD-101A-1.2	D12	CK	LDST Outlet Check	PERF	RF	QTR
2HP-97	OFD-101A-2.2	D12	CK	LDST Outlet Check	PERF	RF	QTR
3HP-97	OFD-101A-3.2	D12	CK	LDST Outlet Check	PERF	RF	QTR
1HP-101	OFD-101A-1.3	J3	CK	"A" HPI Pump Suct Check Valve	OPS/MAINT	None	RF
2HP-101	OFD-101A-2.3	J3	CK	"A" HPI Pump Suct Check Valve	OPS/MAINT	None	RF
3HP-101	OFD-101A-3.3	J2	CK	"A" HPI Pump Suct Check Valve	OPS/MAINT	None	RF
1HP-102	OFD-101A-1.3	E3	CK	"C" HPI Pump Suct Check Valve	OPS/MAINT	None	RF
2HP-102	OFD-101A-2.3	E3	CK	"C" HPI Pump Suct Check Valve	OPS/MAINT	None	RF
3HP-102	OFD-101A-3.3	E2	CK	"C" HPI Pump Suct Check Valve	OPS/MAINT	None	RF
1HP-105	OFD-101A-1.3	J10	CK	"A" HPI Disch Check Valve	PERF/OPS	None	Q/RF
2HP-105	OFD-101A-2.3	J10	CK	"A" HPI Disch Check Valve	PERF/OPS	None	Q/RF
3HP-105	OFD-101A-3.3	J10	CK	"A" HPI Disch Check Valve	PERF/OPS	None	Q/RF
1HP-109	OFD-101A-1.3	G10	CK	"B" HPI Disch Check Valve	PERF/OPS	None	Q/RF
2HP-109	OFD-101A-2.3	G10	CK	"B" HPI Disch Check Valve	PERF/OPS	None	Q/RF
3HP-109	OFD-101A-3.3	G10	CK	"B" HPI Disch Check Valve	PERF/OPS	None	Q/RF
1HP-113	OFD-101A-1.3	D10	CK	"C" HPI Disch Check Valve	PERF/OPS	None	Q/RF
2HP-113	OFD-101A-2.3	D10	CK	"C" HPI Disch Check Valve	PERF/OPS	None	Q/RF
3HP-113	OFD-101A-3.3	D10	CK	"C" HPI Disch Check Valve	PERF/OPS	None	Q/RF
1HP-120	OFD-101A-1.4	J7	AOV	"A" Loop Injection	PERF	None	S/D
2HP-120	OFD-101A-2.4	J7	AOV	"A" Loop Injection	PERF	None	S/D
3HP-120	OFD-101A-3.4	K6	AOV	"A" Loop Injection	PERF	None	S/D
1HP-126	OFD-101A-1.4	J13	CK	"A" Loop Check Valve	OPS	None	RF
2HP-126	OFD-101A-2.4	J13	CK	"A" Loop Check Valve	OPS	None	RF
3HP-126	OFD-101A-3.4	J11	CK	"A" Loop Check Valve	OPS	None	RF
1HP-127	OFD-101A-1.4	J13	CK	"A" Loop Check Valve	OPS	None	RF
2HP-127	OFD-101A-2.4	J13	CK	"A" Loop Check Valve	OPS	None	RF
3HP-127	OFD-101A-3.4	J11	CK	"A" Loop Check Valve	OPS	None	RF
1HP-144	OFD-101A-1.4	G13	CK	Seal Supply to Pump "A2"	PERF	RF	RF
2HP-144	OFD-101A-2.4	F12	CK	Seal Supply to Pump "A2"	PERF	RF	RF
3HP-144	OFD-101A-3.4	H13	CK	Seal Supply to Pump "A2"	PERF	RF	RF
1HP-145	OFD-101A-1.4	F13	CK	Seal Supply to Pump "A1"	PERF	RF	RF
2HP-145	OFD-101A-2.4	G12	CK	Seal Supply to Pump "A1"	PERF	RF	RF
3HP-145	OFD-101A-3.4	I13	CK	Seal Supply to Pump "A1"	PERF	RF	RF
1HP-146	OFD-101A-1.4	H13	CK	Seal Supply to Pump "B2"	PERF	RF	RF
2HP-146	OFD-101A-2.4	H12	CK	Seal Supply to Pump "B2"	PERF	RF	RF
3HP-146	OFD-101A-3.4	G13	CK	Seal Supply to Pump "B2"	PERF	RF	RF
1HP-147	OFD-101A-1.4	I12	CK	Seal Supply to Pump "B1"	PERF	RF	RF
2HP-147	OFD-101A-2.4	I12	CK	Seal Supply to Pump "B1"	PERF	RF	RF
3HP-147	OFD-101A-3.4	F13	CK	Seal Supply to Pump "B1"	PERF	RF	RF

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
1HP-152	OFD-101A-1.4	D14	CK	"B" Loop Check Valve	OPS	None	RF
2HP-152	OFD-101A-2.4	D13	CK	"B" Loop Check Valve	OPS	None	RF
3HP-152	OFD-101A-3.4	D13	CK	"B" Loop Check Valve	OPS	None	RF
1HP-153	OFD-101A-1.4	E13	CK	"B" Loop Check Valve	OPS	None	RF
2HP-153	OFD-101A-2.4	E13	CK	"B" Loop Check Valve	OPS	None	RF
3HP-153	OFD-101A-3.4	E13	CK	"B" Loop Check Valve	OPS	None	RF
1HP-155	OFD-127B-1.2	H7	MAN	CF Tank "A" Fill	PERF	RF	None
2HP-155	OFD-127B-2.2	H7	MAN	CF Tank "A" Fill	PERF	RF	None
3HP-155	OFD-127B-3.2	H7	MAN	CF Tank "A" Fill	PERF	RF	None
1HP-156	OFD-127B-1.2	I7	MAN	CF Tank "B" Fill	PERF	RF	None
2HP-156	OFD-127B-2.2	I7	MAN	CF Tank "B" Fill	PERF	RF	None
3HP-156	OFD-127B-3.2	I7	MAN	CF Tank "B" Fill	PERF	RF	None
1HP-188	OFD-101A-1.4	D11	CK	"B" Loop Check Valve	OPS	None	RF
2HP-188	OFD-101A-2.4	D11	CK	"B" Loop Check Valve	OPS	None	RF
3HP-188	OFD-101A-3.4	D10	CK	"B" Loop Check Valve	OPS	None	RF
1HP-189	OFD-101A-1.2	F6	CK	Seal Return Line Check Valve	MAINT	None	RF
2HP-189	OFD-101A-2.2	F5	CK	Seal Return Line Check Valve	MAINT	None	RF
3HP-189	OFD-101A-3.2	F5	CK	RC Seal Return Line Check Valve	MAINT	None	RF
1HP-194	OFD-101A-1.4	J10	CK	"A" Loop Check Valve	OPS	None	RF
2HP-194	OFD-101A-2.4	J10	CK	"A" Loop Check Valve	OPS	None	RF
3HP-194	OFD-101A-3.4	J8	CK	"A" Loop Check Valve	OPS	None	RF
1HP-202	OFD-101A-1.4	G11	MAN	RCP Seal Supply Penet 23 Vent	PERF	RF	None
2HP-202	OFD-101A-2.4	F10	MAN	RCP "A2" Seal Supply Penet 23 Vent	PERF	RF	None
3HP-202	OFD-101A-3.4	H12	MAN	RCP "A" Seal Supply Penet 23 Vent	PERF	RF	None
1HP-203	OFD-101A-1.4	G11	MAN	RCP Seal Supply Penet 23 PX	PERF	RF	None
1HP-204	OFD-101A-1.4	F10	MAN	RCP Seal Supply Penet 23 Drain	PERF	RF	None
2HP-204	OFD-101A-2.4	E10	MAN	RCP "A2" Seal Supply Penet 23 Drain	PERF	RF	None
3HP-204	OFD-101A-3.4	H11	MAN	RCP "A" Seal Supply Penet 23 Drain	PERF	RF	None
1HP-209	OFD-101A-1.4	F11	MAN	RCP "1A" Seal Supply Penet 23 Vent	PERF	RF	None
2HP-209	OFD-101A-2.4	G11	MAN	RCP "A1" Seal Supply Penet 23 Vent	PERF	RF	None
3HP-209	OFD-101A-3.4	I11	MAN	RCP "A1" Seal Supply Penet 23 Vent	PERF	RF	None
1HP-210	OFD-101A-1.4	F11	MAN	RCP "1A" Seal Supply Penet 23 PX	PERF	RF	None
1HP-211	OFD-101A-1.4	F10	MAN	RCP "1A" Seal Supply Penet 23 Drn	PERF	RF	None
2HP-211	OFD-101A-2.4	F11	MAN	RCP "A1" Seal Supply Penet 23 Drn	PERF	RF	None
3HP-211	OFD-101A-3.4	I11	MAN	RCP "A1" Seal Supply Penet 23 Drn	PERF	RF	None
1HP-216	OFD-101A-1.4	H11	MAN	RCP "B2" Seal Supply Penet 10 Vent	PERF	RF	None
2HP-216	OFD-101A-2.4	H11	MAN	RCP "B2" Seal Supply Penet 10 Vent	PERF	RF	None
3HP-216	OFD-101A-3.4	G11	MAN	RCP "B2" Seal Supply Penet 10 Vent	PERF	RF	None
1HP-217	OFD-101A-1.4	H11	MAN	RCP "B2" Seal Supply Penet 10 PX	PERF	RF	None
1HP-218	OFD-101A-1.4	G10	MAN	RCP "B2" Seal Supply Penet 10 Drn	PERF	RF	None
2HP-218	OFD-101A-2.4	H11	MAN	RCP "B2" Seal Supply Penet 10 Drn	PERF	RF	None
3HP-218	OFD-101A-3.4	G12	MAN	RCP "B2" Seal Supply Penet 10 Drn	PERF	RF	None
1HP-223	OFD-101A-1.4	I11	MAN	RCP "B1" Seal Supply Penet 10 Vent	PERF	RF	None
2HP-223	OFD-101A-2.4	I11	MAN	RCP "B1" Seal Supply Penet 10 Vent	PERF	RF	None
3HP-223	OFD-101A-3.4	F11	MAN	RCP "B1" Seal Supply Penet 10 Vent	PERF	RF	None
1HP-225	OFD-101A-1.4	I11	MAN	RCP "B1" Seal Supply Penet 10 Drn	PERF	RF	None
2HP-225	OFD-101A-2.4	I11	MAN	RCP "B1" Seal Supply Penet 10 Drn	PERF	RF	None
3HP-225	OFD-101A-3.4	F12	MAN	RCP "B1" Seal Supply Penet 10 Drn	PERF	RF	None
1HP-248	OFD-101A-1.3	L10	CK	Pump "A" Recirculation Stop Check	MAINT	None	RF
2HP-248	OFD-101A-2.3	L10	CK	Pump "A" Recirculation Stop Check	MAINT	None	RF
3HP-248	OFD-101A-3.3	H9	CK	Pump "A" Recirculation Stop Check	MAINT	None	RF
1HP-250	OFD-101A-1.3	I9	CK	Pump "B" Recirculation Stop Check	MAINT	None	RF
2HP-250	OFD-101A-2.3	I9	CK	Pump "B" Recirculation Stop Check	MAINT	None	RF
3HP-250	OFD-101A-3.3	I9	CK	Pump "B" Recirculation Stop Check Valve	MAINT	None	RF
1HP-252	OFD-101A-1.3	E9	CK	Pump "C" Recirculation Stop Check	MAINT	None	RF
2HP-252	OFD-101A-2.3	E9	CK	Pump "C" Recirculation Stop Check	MAINT	None	RF

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
3HP-252	OFD-101A-3.3	F8	CK	Pump "C" Recirculation Stop Check	MAINT	None	RF
3HP-285	OFD-101A-3.4	F11	CK	Seal Supply to RCP "B1"	PERF	RF	RF
2HP-286	OFD-101A-2.4	H10	CK	Seal Supply to RCP "B2"	PERF	RF	RF
3HP-286	OFD-101A-3.4	G11	CK	Seal Supply to RCP "B2"	PERF	RF	RF
1HP-355	OFD-101A-1.4	L6	AOV	Aux Pressurizer Spray Flow Control	PERF	None	S/D
2HP-355	OFD-101A-2.4	L6	AOV	Aux Pressurizer Spray Flow Control	PERF	None	S/D
3HP-355	OFD-101A-3.4	L5	AOV	Aux Pressurizer Spray Flow Control	PERF	None	S/D
1HP-363	OFD-101A-1.2	F7	MAN	Letdown Line to LPI Suction Block	PERF	None	S/D
2HP-363	OFD-101A-2.2	F7	MAN	Letdown Line to LPI Suction Block	PERF	None	S/D
3HP-363	OFD-101A-3.2	F7	MAN	Letdown Line to LPI Pump Suction Block	PERF	None	S/D
1HP-364	OFD-101A-1.2	F7	CK	Letdown Line to LPI Suction Check	MAINT	None	RF
2HP-364	OFD-101A-2.2	F7	CK	Letdown Line to LPI Suction Check	MAINT	None	RF
3HP-364	OFD-101A-3.2	F8	CK	Letdown Line to LPI Pump Suction Check	MAINT	None	RF
2HP-389	OFD-101A-2.4	I10	CK	Seal Supply to RCP "B1"	PERF	RF	RF
1HP-390	OFD-101A-1.4	F10	CK	Seal Supply to RCP "A1"	PERF	RF	RF
2HP-390	OFD-101A-2.4	G10	CK	Seal Supply to RCP "A1"	PERF	RF	RF
3HP-390	OFD-101A-3.4	I11	CK	Seal Supply to RCP "A1"	PERF	RF	RF
1HP-393	OFD-101A-1.4	I10	CK	Seal Supply to RCP "B1"	PERF	RF	RF
1HP-398-SSF	OFD-101A-1.5	F11	EMO	RC Makeup to RCP Seals	PERF	None	S/D
2HP-398-SSF	OFD-101A-2.5	F11	EMO	RC Makeup to RCP Seals	PERF	None	S/D
3HP-398-SSF	OFD-101A-3.5	F11	EMO	RC Makeup to RCP Seals	PERF	None	S/D
1HP-399-SSF	OFD-101A-1.5	G13	CK	RC Makeup to RCP Seals	PERF	None	S/D
2HP-399-SSF	OFD-101A-2.5	H13	CK	RC Makeup to RCP Seals	PERF	None	S/D
3HP-399-SSF	OFD-101A-3.5	H13	CK	RC Makeup to RCP Seals	PERF	None	S/D
1HP-400-SSF	OFD-101A-1.5	H13	CK	RC Makeup to RCP Seals	PERF	None	S/D
2HP-400-SSF	OFD-101A-2.5	G13	CK	RC Makeup to RCP Seals	PERF	None	S/D
3HP-400-SSF	OFD-101A-3.5	G13	CK	RC Makeup to RCP Seals	PERF	None	S/D
1HP-401-SSF	OFD-101A-1.5	F13	CK	RC Makeup to RCP Seals	PERF	None	S/D
2HP-401-SSF	OFD-101A-2.5	F13	CK	RC Makeup to RCP Seals	PERF	None	S/D
3HP-401-SSF	OFD-101A-3.5	F13	CK	RC Makeup to RCP Seals	PERF	None	S/D
1HP-402-SSF	OFD-101A-1.5	F13	CK	RC Makeup to RCP Seals	PERF	None	S/D
2HP-402-SSF	OFD-101A-2.5	F13	CK	RC Makeup to RCP Seals	PERF	None	S/D
3HP-402-SSF	OFD-101A-3.5	F13	CK	RC Makeup to RCP Seals	PERF	None	S/D
1HP-405-SSF	OFD-101A-1.5	H10	EMO	RC Makeup Recirc Line	PERF	RF	QTR
2HP-405-SSF	OFD-101A-2.5	H10	EMO	RC Makeup Recirc Line	PERF	RF	QTR
3HP-405-SSF	OFD-101A-3.5	H10	EMO	RC Makeup Recirc Line	PERF	RF	QTR
1HP-409	OFD-101A-1.4	D7	EMO	B Loop HPI X-Connect	PERF	None	S/D
2HP-409	OFD-101A-2.4	E8	EMO	B Loop HPI X-Connect	PERF	None	S/D
3HP-409	OFD-101A-3.4	E8	EMO	B Loop HPI X-Connect	PERF	None	S/D
1HP-410	OFD-101A-1.4	H7	EMO	A Loop HPI X-Connect	PERF	None	S/D
2HP-410	OFD-101A-2.4	F7	EMO	A Loop HPI X-Connect	PERF	None	S/D
3HP-410	OFD-101A-3.4	I7	EMO	A Loop HPI X-Connect	PERF	None	S/D
1HP-417-SSF	OFD-101A-1.5	H9	EMO	RC Makeup Recirc Line	PERF	RF	QTR
2HP-417-SSF	OFD-101A-2.5	I9	EMO	RC Makeup Recirc Line	PERF	RF	QTR
3HP-417-SSF	OFD-101A-3.5	I9	EMO	RC Makeup Recirc Line	PERF	RF	QTR
2HP-420	OFD-101A-2.1	E6	MAN	RCP Seal Return Header Vent (7)	PERF	RF	None
1HP-423-SSF	OFD-101A-1.5	I11	MAN	RC Makeup Pump Recirc Drain (12)	PERF	RF	None
2HP-423-SSF	OFD-101A-2.5	I11	MAN	RC Makeup Pump Recirc Drain (12)	PERF	RF	None
3HP-423-SSF	OFD-101A-3.5	I11	MAN	RC Makeup Pump Recirc Drain (12)	PERF	RF	None
1HP-425-SSF	OFD-101A-1.5	J12	MAN	Letdown to Spent Fuel Vent (12)	PERF	RF	None
2HP-425-SSF	OFD-101A-2.5	J12	MAN	Letdown to Spent Fuel Vent (12)	PERF	RF	None
3HP-425-SSF	OFD-101A-3.5	J12	MAN	Letdown to Spent Fuel Vent (12)	PERF	RF	None
1HP-426-SSF	OFD-101A-1.5	J9	EMO	RC Return from Letdown Line	PERF	RF	S/D
2HP-426-SSF	OFD-101A-2.5	J9	EMO	RC Return from Letdown Line	PERF	RF	S/D
3HP-426-SSF	OFD-101A-3.5	K9	EMO	RC Return from Letdown Line	PERF	RF	S/D
1HP-428-SSF	OFD-101A-1.5	J13	EMO	RC Return from Letdown Line	PERF	RF	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2HP-428-SSF	OFD-101A-2.5	J13	EMO	RC Return from Letdown Line	PERF	RF	QTR
3HP-428-SSF	OFD-101A-3.5	J13	EMO	RC Return from Letdown Line	PERF	RF	QTR
1HP-454	OFD-101A-1.4	G10	CK	Seal Supply to RCP "A2"	PERF	RF	RF
2HP-454	OFD-101A-2.4	G10	CK	Seal Supply to RCP "A2"	PERF	RF	RF
3HP-454	OFD-101A-3.4	H11	CK	Seal Supply to RCP "A2"	PERF	RF	RF
1HP-457	OFD-101A-1.4	H10	CK	Seal Supply to RCP "B2"	PERF	RF	RF
1HP-472	OFD-101A-1.4	L5	MAN	Aux Pressurizer Spray Isolation	PERF	None	S/D
2HP-472	OFD-101A-2.4	L5	MAN	Aux Pressurizer Spray Isolation	PERF	None	S/D
3HP-472	OFD-101A-3.4	L4	MAN	Aux Pressurizer Spray Isolation	PERF	None	S/D
HPSW-25	OFD-124C-1.4	C3	MAN	To Elevated Storage Tank "A"	OPS	None	QTR
1HPSW-184	OFD-124A-1.3	K10	PST	LPSW to TDEFWP Oil Coolers	PERF	None	QTR
2HPSW-184	OFD-124A-2.3	K10	AOV	LPSW to TDEFWP Oil Coolers	PERF	None	QTR
3HPSW-184	OFD-124A-3.3	K10	PST	LPSW to TDEFWP Oil Coolers	PERF	None	QTR
1HPSW-191	OFD-124C-1.2	G8	REG	Emerg FWPT Cooling Jacket	PERF	None	QTR
2HPSW-191	OFD-124C-2.2	H9	REG	Emerg FWPT Cooling Jacket	PERF	None	QTR
3HPSW-191	OFD-124C-3.2	H8	REG	Emerg FWPT Cooling Jacket	PERF	None	QTR
1HPSW-193	OFD-124A-1.3	K11	CK	Emerg FWPT Cooling Jacket	PERF	None	QTR
2HPSW-193	OFD-124A-2.3	K11	CK	Emerg FWPT Cooling Jacket	PERF	None	QTR
3HPSW-193	OFD-124A-3.3	K11	CK	Emerg FWPT Cooling Jacket	PERF	None	QTR
1HPSW-247	OFD-124C-1.2	E8	MAN	HPSW Crossover to HPI Pumps Cooling Jacket	OPS	None	S/D
2HPSW-247	OFD-124C-2.2	D9	MAN	HPSW Crossover to HPI Pumps Cooling Jacket	OPS	None	S/D
3HPSW-247	OFD-124C-3.2	F6	MAN	HPSW Crossover to HPI Pumps Cooling Jacket	OPS	None	S/D
1HPSW-556	OFD-124C-1.3	J11	REG	HPSW Emer Cooling Press Reg Valve	OPS	None	S/D
2HPSW-556	OFD-124C-1.3	I11	REG	HPSW Emer Cooling Press Reg Valve	OPS	None	S/D
3HPSW-556	OFD-124C-3.3	D8	REG	HPSW Emer Cooling Press Reg Valve	OPS	None	S/D
1IA-90	OFD-137B-1.2	D4	MAN	Penetration Isolation	PERF	RF	None
2IA-90	OFD-137B-1.2	D7	MAN	Penetration Isolation	PERF	RF	None
3IA-90	OFD-137B-1.2	D11	MAN	Penetration Isolation	PERF	RF	None
1IA-91	OFD-137B-1.2	C4	MAN	Penetration Isolation	PERF	RF	None
2IA-91	OFD-137B-1.2	C7	MAN	Penetration Isolation	PERF	RF	None
3IA-91	OFD-137B-1.2	C11	MAN	Penetration Isolation	PERF	RF	None
1LP-1	OFD-102A-1.1	H2	EMO	DH Valve	PERF	None	S/D
2LP-1	OFD-102A-2.1	H2	EMO	DH Valve	PERF	None	S/D
3LP-1	OFD-102A-3.1	H2	EMO	DH Valve	PERF	None	S/D
1LP-2	OFD-102A-1.1	H2	EMO	DH RB Isolation	PERF	None	S/D
2LP-2	OFD-102A-2.1	H2	EMO	DH RB Isolation	PERF	None	S/D
3LP-2	OFD-102A-3.1	H2	EMO	DH RB Isolation	PERF	None	S/D
1LP-3	OFD-102A-1.1	H5	EMO	DH RB Isolation	PERF	None	QTR
2LP-3	OFD-102A-2.1	H6	EMO	DH RB Isolation	PERF	None	QTR
3LP-3	OFD-102A-3.1	H6	EMO	RB Isolation	PERF	None	QTR
1LP-5	OFD-102A-1.1	F10	EMO	LP Pump "A" Suction	PERF	None	QTR
2LP-5	OFD-102A-2.1	F10	EMO	LP Pump "A" Suction	PERF	None	QTR
1LP-6	OFD-102A-1.1	E7	EMO	LPI Suction X-Connect	PERF	None	QTR
2LP-6	OFD-102A-2.1	E7	EMO	LPI Suction X-Connect	PERF	None	QTR
3LP-6	OFD-102A-3.1	E7	EMO	LPI Suction X-Connect	PERF	None	QTR
1LP-7	OFD-102A-1.1	D7	EMO	LPI Suction X-Connect	PERF	None	QTR
2LP-7	OFD-102A-2.1	D7	EMO	LPI Suction X-Connect	PERF	None	QTR
3LP-7	OFD-102A-3.1	D7	EMO	LPI Suction X-Connect	PERF	None	QTR
1LP-8	OFD-102A-1.1	D8	EMO	LP Pump "B" Suction	PERF	None	QTR
2LP-8	OFD-102A-2.1	D8	EMO	LP Pump "B" Suction	PERF	None	QTR
1LP-9	OFD-102A-1.2	I7	EMO	LPI Disch X-Connect	PERF	None	QTR
2LP-9	OFD-102A-2.2	I8	EMO	LPI Disch X-Connect	PERF	None	QTR
3LP-9	OFD-102A-3.2	I7	EMO	LPI Disch X-Connect	PERF	None	QTR
1LP-10	OFD-102A-1.2	G7	EMO	LPI Disch X-Connect	PERF	None	QTR
2LP-10	OFD-102A-2.2	H8	EMO	LPI Disch X-Connect	PERF	None	QTR
3LP-10	OFD-102A-3.2	G7	EMO	LPI Disch X-Connect	PERF	None	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
1LP-11	OFD-102A-1.2	K7	EMO	Cooler "A" Inlet	PERF	None	QTR
2LP-11	OFD-102A-2.2	K8	EMO	Cooler "A" Inlet	PERF	None	QTR
1LP-12	OFD-102A-1.2	K11	EMO	LPI "A" Cooler Outlet	PERF	None	QTR
2LP-12	OFD-102A-2.2	K11	EMO	LPI "A" Cooler Outlet	PERF	None	QTR
3LP-12	OFD-102A-3.2	K11	EMO	LPI "A" Cooler Outlet	PERF	None	QTR
1LP-14	OFD-102A-1.2	E11	EMO	LPI "B" Cooler Outlet	PERF	None	QTR
2LP-14	OFD-102A-2.2	E11	EMO	LPI "B" Cooler Outlet	PERF	None	QTR
3LP-14	OFD-102A-3.2	E11	EMO	LPI "B" Cooler Outlet	PERF	None	QTR
1LP-15	OFD-102A-1.2	L11	EMO	LPI "A" Header to HPI	PERF	None	QTR
2LP-15	OFD-102A-2.2	L11	EMO	LPI "A" Header to HPI	PERF	None	QTR
3LP-15	OFD-102A-3.2	K12	EMO	LPI "A" Header to HPI	PERF	None	QTR
1LP-16	OFD-102A-1.2	O-4	EMO	LPI "B" Header to HPI	PERF	None	QTR
2LP-16	OFD-102A-2.2	D11	EMO	LPI "B" Header to HPI	PERF	None	QTR
3LP-16	OFD-102A-3.2	E12	EMO	LPI "B" Header to HPI	PERF	None	QTR
1LP-17	OFD-102A-1.2	K13	EMO	LPI "A" RB Isolation Valve	PERF	None	S/D
2LP-17	OFD-102A-2.2	K12	EMO	LPI "A" RB Isolation Valve	PERF	None	S/D
3LP-17	OFD-102A-3.2	K13	EMO	LPI "A" RB Isolation Valve	PERF	None	S/D
1LP-18	OFD-102A-1.2	E13	EMO	LPI "B" Isolation Valve	PERF	None	S/D
2LP-18	OFD-102A-2.2	E13	EMO	LPI "B" RB Isolation Valve	PERF	None	S/D
3LP-18	OFD-102A-3.2	E13	EMO	LPI "B" RB Isolation Valve	PERF	None	S/D
1LP-19	OFD-102A-1.1	D5	EMO	RB Emergency Sump	PERF	None	QTR
2LP-19	OFD-102A-2.1	D5	EMO	RB Emergency Sump	PERF	None	QTR
3LP-19	OFD-102A-3.1	D5	EMO	RB Emergency Sump	PERF	None	QTR
1LP-20	OFD-102A-1.1	D5	EMO	RB Emergency Sump	PERF	None	QTR
2LP-20	OFD-102A-2.1	D5	EMO	RB Emergency Sump	PERF	None	QTR
3LP-20	OFD-102A-3.1	D5	EMO	RB Emergency Sump	PERF	None	QTR
1LP-21	OFD-102A-1.1	F7	EMO	BWST to LPI Suction	PERF	None	QTR
2LP-21	OFD-102A-2.1	E7	EMO	BWST to LPI Suction	PERF	None	QTR
3LP-21	OFD-102A-3.1	E7	EMO	BWST to LPI Suction	PERF	None	QTR
1LP-22	OFD-102A-1.1	D7	EMO	BWST to LPI Suction	PERF	None	QTR
2LP-22	OFD-102A-2.1	D7	EMO	BWST to LPI Suction	PERF	None	QTR
3LP-22	OFD-102A-3.1	D7	EMO	BWST to LPI Suction	PERF	None	QTR
1LP-25	OFD-102A-1.1	J2	RV	RC Return Header Relief Valve	MAINT	None	RF
2LP-25	OFD-102A-2.1	J2	RV	RC Return Header Relief Valve	MAINT	None	RF
3LP-25	OFD-102A-3.1	J3	RV	RC Return Header Relief Valve	MAINT	None	RF
1LP-28	OFD-102A-1.1	H10	MAN	BWST Isolation	PERF	None	S/D
2LP-28	OFD-102A-2.1	H10	MAN	BWST Isolation	PERF	None	S/D
3LP-28	OFD-102A-3.1	H10	MAN	BWST Isolation	PERF	None	S/D
1LP-29	OFD-102A-1.1	F6	CK	BWST to "A" LPI Header	PERF	None	QTR
2LP-29	OFD-102A-2.1	F6	CK	BWST to "A" LPI Header	PERF	None	QTR
3LP-29	OFD-102A-3.1	E7	CK	BWST to "A" LPI Header	PERF/MAINT	None	QTR
1LP-30	OFD-102A-1.1	D6	CK	BWST to "B" LPI Header	PERF	None	QTR
2LP-30	OFD-102A-2.1	D6	CK	BWST to "B" LPI Header	PERF	None	QTR
3LP-30	OFD-102A-3.1	C6	CK	BWST to "B" LPI Header	PERF/MAINT	None	QTR
1LP-31	OFD-102A-1.2	K5	CK	"A" LPI Pump Discharge	PERF	None	Q/SD
2LP-31	OFD-102A-2.2	K5	CK	"A" LPI Pump Discharge	PERF	None	Q/SD
3LP-31	OFD-102A-3.2	K5	CK	"A" LPI Pump Discharge	PERF	None	Q/SD
1LP-33	OFD-102A-1.2	E6	CK	"B" LPI Pump Discharge	PERF	None	QTR
2LP-33	OFD-102A-2.2	E5	CK	"B" LPI Pump Discharge	PERF	None	QTR
3LP-33	OFD-102A-3.2	E5	CK	"B" LPI Pump Discharge	PERF	None	QTR
1LP-35	OFD-102A-1.2	H5	CK	Pump "C" Discharge Check	PERF	None	QTR
2LP-35	OFD-102A-2.2	H5	CK	Pump "C" Discharge Check	PERF	None	QTR
3LP-35	OFD-102A-3.2	H5	CK	Pump "C" Discharge Check	PERF	None	QTR
1LP-47	OFD-102A-1.2	E14	CK	"A" LPI Header Check Valve	PERF	S/D	S/D
2LP-47	OFD-102A-2.2	E14	CK	"B" LPI Header Check Valve	PERF	S/D	S/D
3LP-47	OFD-102A-3.2	E14	CK	"A" LPI Header Check Valve	PERF	S/D	S/D

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
1LP-48	OFD-102A-1.2	K14	CK	"B" LPI Header Check Valve	PERF	S/D	S/D
2LP-48	OFD-102A-2.2	K14	CK	"A" LPI Header Check Valve	PERF	S/D	S/D
3LP-48	OFD-102A-3.2	K14	CK	"B" LPI Header Check Valve	PERF	S/D	S/D
1LP-55	OFD-101A-1.3	K3	CK	"A" Cooler Out to HP Pump Suction	OPS	None	RF
2LP-55	OFD-101A-2.3	K3	CK	"A" Cooler Out to HP Pump Suction	OPS	None	RF
3LP-55	OFD-101A-3.3	K3	CK	"A" Cooler Out to HP Pump Suction	OPS	None	RF
1LP-57	OFD-101A-1.3	C3	CK	"B" Cooler Out to HP Pump Suction	OPS	None	RF
2LP-57	OFD-101A-2.3	C3	CK	"B" Cooler Out to HP Pump Suction	OPS	None	RF
3LP-57	OFD-101A-3.3	D2	CK	"B" Cooler Out to HP Pump Suction	OPS	None	RF
1LP-68	OFD-102A-1.1	H6	MAN	D/H Inlet to "B" Cooler	OPS/MAINT	None	S/D
2LP-68	OFD-102A-2.1	H7	MAN	D/H Inlet to "B" Cooler	OPS/MAINT	None	S/D
1LP-69	OFD-102A-1.2	H8	EMO	Switchover Mode Control	PERF	None	QTR
2LP-69	OFD-102A-2.2	I8	EMO	Switchover Mode Control	PERF	None	QTR
1LP-73	OFD-102A-1.2	E10	MAN	"B" Cooler Disc Block	OPS/MAINT	None	S/D
2LP-73	OFD-102A-2.2	F10	MAN	"B" Cooler Disc Block	OPS/MAINT	None	S/D
1LP-74	OFD-102A-1.2	J2	MAN	"B" Cooler Disc Block to "A" Pump	OPS/MAINT	None	S/D
2LP-74	OFD-102A-2.2	K2	MAN	"B" Cooler Disc Block to "A" Pump	OPS/MAINT	None	S/D
1LP-75	OFD-102A-1.2	H2	MAN	"B" Cooler Disc Block to "C" Pump	OPS/MAINT	None	S/D
2LP-75	OFD-102A-2.2	I2	MAN	"B" Cooler Disc Block to "C" Pump	OPS/MAINT	None	S/D
1LP-103	OFD-102A-1.1	H2	EMO	Boron Dilution	PERF	None	S/D
2LP-103	OFD-102A-2.1	H2	EMO	Boron Dilution	PERF	None	S/D
3LP-103	OFD-102A-3.1	G2	EMO	Boron Dilution	PERF	None	S/D
1LP-104	OFD-102A-1.1	F2	EMO	Boron Dilution	PERF	None	S/D
2LP-104	OFD-102A-2.1	F2	EMO	Boron Dilution	PERF	None	S/D
3LP-104	OFD-102A-3.1	G2	EMO	Boron Dilution	PERF	None	S/D
1LP-105	OFD-102A-1.1	H2	EMO	Boron Dilution	PERF	None	S/D
2LP-108	OFD-102A-2.1	H6	MAN	Boron Dilution	PERF	None	QTR
3LP-108	OFD-102A-3.1	H6	MAN	Boron Dilution	PERF	None	QTR
2LP-109	OFD-102A-2.1	G6	MAN	Boron Dilution	PERF	None	QTR
3LP-109	OFD-102A-3.1	H6	MAN	Boron Dilution	PERF	None	QTR
1LPSW-4	OFD-124B-1.1	K6	EMO	DH Cooler "1A" Outlet	PERF	None	QTR
2LPSW-4	OFD-124B-2.1	K6	EMO	DH Cooler "2A" Outlet	PERF	None	QTR
3LPSW-4	OFD-124B-3.1	K6	EMO	DH Cooler "3A" Outlet	PERF	None	QTR
1LPSW-5	OFD-124B-1.1	H6	EMO	DH Cooler "1B" Outlet	PERF	None	QTR
2LPSW-5	OFD-124B-2.1	H6	EMO	DH Cooler "2B" Outlet	PERF	None	QTR
3LPSW-5	OFD-124B-3.1	H6	EMO	DH Cooler "3B" Outlet	PERF	None	QTR
1LPSW-6	OFD-124B-1.4	L2	EMO	LPSW to RCP Oil Coolers	PERF	None	S/D
2LPSW-6	OFD-124B-2.4	L2	EMO	LPSW to RCP Oil Coolers	PERF	None	S/D
3LPSW-6	OFD-124B-3.4	L2	EMO	LPSW to RCP Oil Coolers	PERF	None	S/D
1LPSW-15	OFD-124B-1.4	G14	EMO	LPSW from RCP Oil Coolers	PERF	RF	S/D
2LPSW-15	OFD-124B-2.4	G14	EMO	LPSW from RCP Oil Coolers	PERF	RF	S/D
3LPSW-15	OFD-124B-3.4	G14	EMO	LPSW from RCP Oil Coolers	PERF	RF	S/D
1LPSW-18	OFD-124B-1.2	D3	EMO	LPSW from RBCU "1A"	PERF	None	QTR
2LPSW-18	OFD-124B-2.2	D3	EMO	LPSW from RBCU "2A"	PERF	None	QTR
3LPSW-18	OFD-124B-3.2	C3	EMO	LPSW from RBCU "3A"	PERF	None	QTR
1LPSW-21	OFD-124B-1.2	D8	EMO	LPSW from RBCU "1B"	PERF	None	QTR
2LPSW-21	OFD-124B-2.2	D8	EMO	LPSW from RBCU "2B"	PERF	None	QTR
3LPSW-21	OFD-124B-3.2	C8	EMO	LPSW from RBCU "3B"	PERF	None	QTR
1LPSW-24	OFD-124B-1.2	D12	EMO	LPSW from RBCU "1C"	PERF	None	QTR
2LPSW-24	OFD-124B-2.2	D12	EMO	LPSW from RBCU "2C"	PERF	None	QTR
3LPSW-24	OFD-124B-3.2	C12	EMO	LPSW from RBCU "3C"	PERF	None	QTR
LPSW-25	OFD-124A-1.1	D7	CK	Pump "C" Discharge Check	PERF	None	QTR
LPSW-28	OFD-124A-1.1	J7	CK	Pump "A" Discharge Check	PERF	None	QTR
LPSW-31	OFD-124A-1.1	G7	CK	Pump "B" Discharge Check	PERF	None	QTR
3LPSW-45	OFD-124A-3.1	E10	EMO	LPSW to Main Turbine Oil Coolers	PERF	None	S/D
1LPSW-75	OFD-124B-1.1	K6	CK	DH Cooler "1A" Outlet CV	PERF	None	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2LPSW-75	OFD-124B-2.1	K7	CK	DH Cooler "2A" Outlet CV	PERF	None	QTR
3LPSW-75	OFD-124B-3.1	K6	CK	DH Cooler "3A" Outlet CV	PERF	None	QTR
1LPSW-76	OFD-124B-1.1	H6	CK	DH Coolers "1B" Outlet CV	PERF	None	QTR
2LPSW-76	OFD-124B-2.1	H7	CK	DH Coolers "2B" Outlet CV	PERF	None	QTR
3LPSW-76	OFD-124B-3.1	H6	CK	DH Coolers "3B" Outlet CV	PERF	None	QTR
3LPSW-121	OFD-124A-3.1	J7	CK	LPSW Pump 3A Discharge Check	PERF	None	QTR
3LPSW-124	OFD-124A-3.1	G7	CK	LPSW Pump 3B Discharge Check	PERF	None	QTR
1LPSW-137	OFD-124A-1.3	K11	EMO	LPSW to Unit 1 TDEFWP Cooling Jacket	PERF	None	QTR
2LPSW-137	OFD-124A-2.3	K11	EMO	LPSW to Unit 2 TDEFWP Cooling Jacket	PERF	None	QTR
3LPSW-137	OFD-124A-3.3	K11	EMO	LPSW to Unit 3 TDEFWP Cooling Jacket	PERF	None	QTR
1LPSW-138	OFD-124A-1.3	L11	PST	Bypass around Vlv to Cooling Jacket	PERF	None	QTR
2LPSW-138	OFD-124A-2.3	L11	PST	Bypass around Vlv to Cooling Jacket	PERF	None	QTR
3LPSW-138	OFD-124A-3.3	L11	PST	Bypass around Vlv to Cooling Jacket	PERF	None	QTR
1LPSW-139	OFD-124A-1.1	C8	EMO	LPSW "A" Line to Turbine Building Hdr	PERF	None	RF
1LPSW-144	OFD-124B-1.4	G13	MAN	LPSW 22 Return Penet Test Drain	PERF	RF	None
2LPSW-144	OFD-124B-2.4	G13	MAN	LPSW Return Penet 22 Test Drain	PERF	RF	None
3LPSW-144	OFD-124B-3.4	G13	MAN	LPSW Return Penet 22 Test Drain	PERF	RF	None
1LPSW-145	OFD-124B-1.4	H13	MAN	LPSW 22 Return Penet Test Vent	PERF	RF	None
2LPSW-145	OFD-124B-2.4	H13	MAN	LPSW Return Penet 22 Test Vent	PERF	RF	None
3LPSW-145	OFD-124B-3.4	H13	MAN	LPSW Return Penet 22 Test Vent	PERF	RF	None
1LPSW-146	OFD-124B-1.4	H14	MAN	LPSW 22 Return Penet Test Gauge	PERF	RF	None
2LPSW-146	OFD-124B-2.4	H13	MAN	LPSW Return Penet 22 Test Gauge	PERF	RF	None
3LPSW-146	OFD-124B-3.4	H14	MAN	LPSW Return Penet 22 Test Gauge	PERF	RF	None
1LPSW-148	OFD-124B-1.1	L4	CK	Normal Supply CV to U1 HPI Pump Motor Bearing	OPS	None	QTR
2LPSW-148	OFD-124B-2.1	L7	CK	Normal Supply CV to U2 HPI Pump Motor Bearing	OPS	None	QTR
3LPSW-148	OFD-124B-3.1	L4	CK	Normal Supply CV to U3 HPI Pump Motor Bearing	OPS	None	QTR
1LPSW-151	OFD-124B-1.1	F3	CK	Emerg Supply CV to U1 HPI Pump Motor Bearing	OPS	None	QTR
2LPSW-151	OFD-124B-2.1	G10	CK	Emerg Supply CV to U2 HPI Pump Motor Bearing	OPS	None	QTR
3LPSW-151	OFD-124B-3.1	F8	CK	Normal Supply CV to U3 HPI Pump Motor Bearing	OPS	None	QTR
1LPSW-251	OFD-124B-1.1	J8	AOV	DH Cooler Outlet	PERF	None	QTR
2LPSW-251	OFD-124B-2.1	J8	AOV	DH Cooler Outlet	PERF	None	QTR
1LPSW-252	OFD-124B-1.1	I8	AOV	DH Cooler Outlet	PERF	None	QTR
2LPSW-252	OFD-124B-2.1	I8	AOV	DH Cooler Outlet	PERF	None	QTR
3LPSW-404	OFD-124B-3.1	H7	AOV	LPSW DH Cooler Outlet	PERF	None	QTR
3LPSW-405	OFD-124B-3.1	K7	AOV	LPSW DH Cooler Outlet	PERF	None	QTR
2LPSW-503	OFD-124B-2.1	G3	CK	LPSW Supply Check Valve to HPI Pump Motor Bearing C	OPS	None	QTR
3LPSW-503	OFD-124B-3.1	F3	CK	Emerg Supply to HPI Pump Motor Coolers	OPS	None	QTR
1LPSW-516	OFD-124A-1.3	K5	PST	Auto Valve from "A" MDEFWP Motor	PERF	None	QTR
2LPSW-516	OFD-124A-2.3	K5	PST	Auto Valve from "A" MDEFWP Motor	PERF	None	QTR
3LPSW-516	OFD-124A-3.3	K5	PST	Auto Valve from "A" MDEFWP Motor	PERF	None	QTR
1LPSW-525	OFD-124A-1.3	J5	PST	Auto Valve from "B" MDEFWP Motor	PERF	None	QTR
2LPSW-525	OFD-124A-2.3	J5	PST	Auto Valve from "B" MDEFWP Motor	PERF	None	QTR
3LPSW-525	OFD-124A-3.3	J5	PST	Auto Valve from "B" MDEFWP Motor	PERF	None	QTR
1LPSW-565	OFD-124B-1.2	J8	EMO	RB Aux Cooler Inlet	PERF	None	QTR
2LPSW-565	OFD-124B-2.2	J8	EMO	RB Aux Cooler Inlet	PERF	None	QTR
3LPSW-565	OFD-124B-3.2	I8	EMO	RB Aux Cooler Inlet	PERF	None	QTR
1LPSW-566	OFD-124B-1.2	I8	EMO	RBCU Inlet	PERF	None	QTR
2LPSW-566	OFD-124B-2.2	I8	EMO	RBCU Inlet	PERF	None	QTR
3LPSW-566	OFD-124B-3.2	I8	EMO	RBCU Inlet	PERF	None	QTR
1LPSW-687	OFD-124A-1.3	K10	CK	U1 TDEFWP Cooling Water Supply	PERF	None	QTR
2LPSW-687	OFD-124A-2.3	K10	CK	U2 TDEFWP Cooling Water Supply	PERF	None	QTR
3LPSW-687	OFD-124A-3.3	K10	CK	U3 TDEFWP Cooling Water Supply	PERF	None	QTR
1LRT-17	OFD-137E-1.1	K10	AOV	Pressurization Block	PERF	RF	None
2LRT-17	OFD-137E-1.1	H10	AOV	Pressurization Block	PERF	RF	None
3LRT-17	OFD-137E-1.1	E9	AOV	Pressurization Block	PERF	RF	None
1LRT-24	OFD-137E-1.1	I12	MAN	Leak Rate Test	PERF	RF	None

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2LRT-24	OFD-137E-1.1	G11	MAN	Leak Rate Test	PERF	RF	None
3LRT-24	OFD-137E-1.1	C11	MAN	Leak Rate Test	PERF	RF	None
1LRT-25	OFD-137E-1.1	I12	MAN	Leak Rate Test	PERF	RF	None
2LRT-25	OFD-137E-1.1	G11	MAN	Leak Rate Test	PERF	RF	None
3LRT-25	OFD-137E-1.1	C11	MAN	Leak Rate Test	PERF	RF	None
2LRT-36	OFD-137E-1.1	F11	MAN	Leak Rate Test	PERF	RF	None
3LRT-36	OFD-137E-1.1	C11	MAN	Leak Rate Test	PERF	RF	None
2LRT-37	OFD-137E-1.1	F11	MAN	Leak Rate Test	PERF	RF	None
3LRT-37	OFD-137E-1.1	C11	MAN	Leak Rate Test	PERF	RF	None
1LRT-38	OFD-137E-1.1	J12	MAN	Leak Rate Test	PERF	RF	None
2LRT-38	OFD-137E-1.1	H11	MAN	Leak Rate Test	PERF	RF	None
3LRT-38	OFD-137E-1.1	D11	MAN	Leak Rate Test	PERF	RF	None
1LRT-39	OFD-137E-1.1	J13	MAN	Leak Rate Test	PERF	RF	None
2LRT-39	OFD-137E-1.1	H12	MAN	Leak Rate Test	PERF	RF	None
3LRT-39	OFD-137E-1.1	D11	MAN	Leak Rate Test	PERF	RF	None
1LRT-54	OFD-137E-1.1	K11	MAN	Penetration 51 Test Connection	PERF	RF	None
2LRT-54	OFD-137E-1.1	H11	MAN	Penetration 51 Test Connection	PERF	RF	None
3LRT-54	OFD-137E-1.1	E11	MAN	Penetration 51 Test Connection	PERF	RF	None
1LWD-1	OFD-107B-1.1	C11	EMO	Normal Pump Suction	PERF	RF	QTR
2LWD-1	OFD-107B-2.1	C11	EMO	Normal Pump Suction	PERF	RF	QTR
3LWD-1	OFD-107B-3.1	C11	EMO	Normal Pump Suction	PERF	RF	QTR
1LWD-2	OFD-107B-1.1	C11	AOV	Normal Pump Suction	PERF	RF	QTR
2LWD-2	OFD-107B-2.1	C12	AOV	Normal Pump Suction	PERF	RF	QTR
3LWD-2	OFD-107B-3.1	C12	AOV	Normal Pump Suction	PERF	RF	QTR
1LWD-27	OFD-107B-1.1	B11	MAN	RB Nrml Sump Penet 5 Drn	PERF	RF	None
2LWD-27	OFD-107B-2.1	B11	MAN	RB Nrml Sump Penet 5 Drn	PERF	RF	None
3LWD-27	OFD-107B-3.1	B11	MAN	RB Nrml Sump Penet 5 Drn	PERF	RF	None
1LWD-28	OFD-107B-1.1	C11	MAN	RB Nrml Sump Penet 5 Vent	PERF	RF	None
2LWD-28	OFD-107B-2.1	C11	MAN	RB Nrml Sump Penet 5 Vent	PERF	RF	None
3LWD-28	OFD-107B-3.1	B12	MAN	RB Nrml Sump Penet 5 Vent	PERF	RF	None
1LWD-29	OFD-107B-1.1	C11	MAN	RB Nrml Sump Penet 5 PX	PERF	RF	None
2LWD-29	OFD-107B-2.1	C11	MAN	RB Nrml Sump Penet 5 PX	PERF	RF	None
3LWD-29	OFD-107B-3.1	B12	MAN	RB Nrml Sump Penet 5 PX	PERF	RF	None
1LWD-99	OFD-107D-1.2	E9	MAN	Emergency Sump Drain Isolation Valve	PERF	ILRT	None
2LWD-99	OFD-107D-2.2	G8	MAN	Emergency Sump Drain Isolation Valve	PERF	ILRT	None
3LWD-99	OFD-107D-3.2	G3	MAN	Emergency Sump Drain Isolation Valve	PERF	ILRT	None
1LWD-103	OFD-107D-1.2	E9	MAN	Emergency Sump Drain Isolation	PERF	ILRT	None
2LWD-103	OFD-107D-2.2	G8	MAN	Emergency Sump Drain Isolation	PERF	ILRT	None
3LWD-103	OFD-107D-3.2	G3	MAN	Emergency Sump Drain Isolation	PERF	ILRT	None
1MS-1	OFD-122A-1.1	J9	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-1	OFD-122A-2.1	J9	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-1	OFD-122A-3.1	J9	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-2	OFD-122A-1.1	J4	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-2	OFD-122A-2.1	J4	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-2	OFD-122A-3.1	J4	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-3	OFD-122A-1.1	J7	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-3	OFD-122A-2.1	J7	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-3	OFD-122A-3.1	J7	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-4	OFD-122A-1.1	J5	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-4	OFD-122A-2.1	J5	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-4	OFD-122A-3.1	J5	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-5	OFD-122A-1.1	J8	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-5	OFD-122A-2.1	J8	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-5	OFD-122A-3.1	J8	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-6	OFD-122A-1.1	J5	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-6	OFD-122A-2.1	J5	RV	Main Steam Relief Valve	MAINT	None	RF

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
3MS-6	OFD-122A-3.1	J5	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-7	OFD-122A-1.1	J7	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-7	OFD-122A-2.1	J7	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-7	OFD-122A-3.1	J7	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-8	OFD-122A-1.1	J6	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-8	OFD-122A-2.1	J6	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-8	OFD-122A-3.1	J6	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-9	OFD-122A-1.1	D9	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-9	OFD-122A-2.1	D9	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-9	OFD-122A-3.1	D9	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-10	OFD-122A-1.1	D4	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-10	OFD-122A-2.1	D4	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-10	OFD-122A-3.1	D4	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-11	OFD-122A-1.1	D7	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-11	OFD-122A-2.1	D7	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-11	OFD-122A-3.1	D7	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-12	OFD-122A-1.1	D5	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-12	OFD-122A-2.1	D5	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-12	OFD-122A-3.1	D5	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-13	OFD-122A-1.1	D8	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-13	OFD-122A-2.1	D8	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-13	OFD-122A-3.1	D8	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-14	OFD-122A-1.1	D5	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-14	OFD-122A-2.1	D5	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-14	OFD-122A-3.1	D5	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-15	OFD-122A-1.1	D7	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-15	OFD-122A-2.1	D7	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-15	OFD-122A-3.1	D7	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-16	OFD-122A-1.1	D6	RV	Main Steam Relief Valve	MAINT	None	RF
2MS-16	OFD-122A-2.1	D6	RV	Main Steam Relief Valve	MAINT	None	RF
3MS-16	OFD-122A-3.1	D6	RV	Main Steam Relief Valve	MAINT	None	RF
1MS-17	OFD-122A-1.2	I5	EMO	Steam Header "A" Turbine Bypass	PERF	None	S/D
2MS-17	OFD-122A-2.2	I5	EMO	Steam Header "A" Turbine Bypass	PERF	None	S/D
3MS-17	OFD-122A-3.2	I5	EMO	Steam Header "A" Turbine Bypass	PERF	None	S/D
1MS-19	OFD-122A-1.2	I7	PST	Turbine Bypass Control "A"	PERF	None	S/D
2MS-19	OFD-122A-2.2	I8	PST	Turbine Bypass Control "A"	PERF	None	S/D
3MS-19	OFD-122A-3.2	I8	PST	Turbine Bypass Control "A"	PERF	None	S/D
1MS-22	OFD-122A-1.2	K8	PST	Turbine Bypass Control "B"	PERF	None	S/D
2MS-22	OFD-122A-2.2	K8	PST	Turbine Bypass Control "B"	PERF	None	S/D
3MS-22	OFD-122A-3.2	K8	PST	Turbine Bypass Control "B"	PERF	None	S/D
1MS-24	OFD-122A-1.2	H3	EMO	MS Line "A" to Aux Steam	PERF	None	QTR
2MS-24	OFD-122A-2.2	H3	EMO	MS Line "A" to Aux Steam	PERF	None	QTR
3MS-24	OFD-122A-3.2	H3	EMO	MS Line "A" to Aux Steam	PERF	None	QTR
1MS-26	OFD-122A-1.2	D5	EMO	Steam Header "B" Turbine Bypass	PERF	None	S/D
2MS-26	OFD-122A-2.2	D5	EMO	Steam Header "B" Turbine Bypass	PERF	None	S/D
3MS-26	OFD-122A-3.2	D5	EMO	Steam Header "B" Turbine Bypass	PERF	None	S/D
1MS-28	OFD-122A-1.2	F8	PST	Turbine Bypass Control "C"	PERF	None	S/D
2MS-28	OFD-122A-2.2	F8	PST	Turbine Bypass Control "C"	PERF	None	S/D
3MS-28	OFD-122A-3.2	F8	PST	Turbine Bypass Control "C"	PERF	None	S/D
1MS-31	OFD-122A-1.2	D8	PST	Turbine Bypass Control "D"	PERF	None	S/D
2MS-31	OFD-122A-2.2	D8	PST	Turbine Bypass Control "D"	PERF	None	S/D
3MS-31	OFD-122A-3.2	D8	PST	Turbine Bypass Control "D"	PERF	None	S/D
1MS-33	OFD-122A-1.2	E3	EMO	MS Line "B" to Aux Steam	PERF	None	QTR
2MS-33	OFD-122A-2.2	E3	EMO	MS Line "B" to Aux Steam	PERF	None	QTR
3MS-33	OFD-122A-3.2	E3	EMO	MS Line "B" to Aux Steam	PERF	None	QTR
1MS-35	OFD-122A-1.3	L2	EMO	Main Steam to FDW Turbine "A"	PERF	None	S/D

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2MS-35	OFD-122A-2.3	L2	EMO	Main Steam to FDW Turbine "A"	PERF	None	S/D
3MS-35	OFD-122A-3.3	L2	EMO	Main Steam to FDW Turbine "A"	PERF	None	S/D
1MS-36	OFD-122A-1.3	F2	EMO	Main Strm to FDW Turbine "B" and CSAE'S	PERF	None	S/D
2MS-36	OFD-122A-2.3	F2	EMO	Main Strm to FDW Turbine "B" and CSAE'S	PERF	None	S/D
3MS-36	OFD-122A-3.3	F2	EMO	Main Strm to FDW Turbine "B" and CSAE'S	PERF	None	S/D
1MS-46	OFD-121C-1.1	H3	AOV	Emergency Air Ejector Steam Control	PERF	None	S/D
2MS-46	OFD-121C-2.1	H3	AOV	Emergency Air Ejector Steam Control	PERF	None	S/D
1MS-76	OFD-122A-1.1	C10	EMO	MS Line "B" to SSRH 1A1 & 1A2	PERF	None	S/D
2MS-76	OFD-122A-2.1	I10	EMO	MS Line "B" to SSRH 2A1 & 2A2	PERF	None	S/D
3MS-76	OFD-122A-3.1	I10	EMO	MS Line "B" to SSRH 3A1 & 3A2	PERF	None	S/D
1MS-79	OFD-122A-1.1	I10	EMO	MS Line to SSRH B1 & B2	PERF	None	S/D
2MS-79	OFD-122A-2.1	C10	EMO	MS Line to SSRH 2B1 & 2B2	PERF	None	S/D
3MS-79	OFD-122A-3.1	C10	EMO	MS Line to SSRH 3B1 & 3B2	PERF	None	S/D
1MS-82	OFD-122A-1.4	I2	EMO	MS Line "A" to EFDW Turbine	PERF	None	QTR
2MS-82	OFD-122A-2.4	I2	EMO	MS Line "A" to EFDW Turbine	PERF	None	QTR
3MS-82	OFD-122A-3.4	I2	EMO	MS Line "A" to EFDW Turbine	PERF	None	QTR
1MS-83	OFD-122A-1.4	H2	CK	MS Line "A" to EFDW Pump Turbine Check	PERF	None	QTR
2MS-83	OFD-122A-2.4	H2	CK	MS Line "A" to EFDW Turbine Pump Check	PERF	None	QTR
3MS-83	OFD-122A-3.4	H2	CK	MS Line "A" to EFDW Pump Turbine Check	PERF	None	QTR
1MS-84	OFD-122A-1.4	G2	EMO	MS Line "B" to EFDW Turbine	PERF	None	QTR
2MS-84	OFD-122A-2.4	G2	EMO	MS Line "B" to EFDW Turbine	PERF	None	QTR
3MS-84	OFD-122A-3.4	G2	EMO	MS Line "B" to EFDW Turbine	PERF	None	QTR
1MS-85	OFD-122A-1.4	G2	CK	MS Line "B" to EFDW Pump Turbine Check	PERF	None	QTR
2MS-85	OFD-122A-2.4	G2	CK	MS Line "B" to EFDW Turbine Pump Check	PERF	None	QTR
3MS-85	OFD-122A-3.4	G2	CK	MS Line "B" to EFDW Pump Turbine Check	PERF	None	QTR
1MS-87	OFD-122A-1.4	H3	AOV	MS to Emerg FDW Turbine Control	PERF	None	QTR
2MS-87	OFD-122A-2.4	H3	AOV	MS to Emerg FDW Turbine Control	PERF	None	QTR
3MS-87	OFD-122A-3.4	H3	AOV	MS to Emerg FDW Turbine Control	PERF	None	QTR
1MS-91	OFD-122A-1.4	H5	CK	MS to EFPT Supply Check	PERF	None	QTR
2MS-91	OFD-122A-2.4	H5	CK	MS to EFPT Supply Check	PERF	None	QTR
3MS-91	OFD-122A-3.4	H5	CK	MS to EFPT Supply Check	PERF	None	QTR
1MS-93	OFD-122A-1.4	H7	AOV	EFPT Supply Trip Valve	PERF	None	QTR
2MS-93	OFD-122A-2.4	H7	AOV	EFPT Supply Trip Valve	PERF	None	QTR
3MS-93	OFD-122A-3.4	H7	AOV	EFPT Supply Trip Valve	PERF	None	QTR
1MS-94	OFD-122A-1.4	H8	STP	Emerg FDWT Stop Valve	PERF	None	QTR
2MS-94	OFD-122A-2.4	H8	STP	Emerg FDWT Stop Valve	PERF	None	QTR
3MS-94	OFD-122A-3.4	H8	STP	Emerg FDWT Stop Valve	PERF	None	QTR
1MS-95	OFD-122A-1.4	H9	CTR	Emerg FDWT Governor Valve	PERF	None	QTR
2MS-95	OFD-122A-2.4	H9	CTR	Emerg FDWT Governor Valve	PERF	None	QTR
3MS-95	OFD-122A-3.4	H9	CTR	Emerg FDWT Governor Valve	PERF	None	QTR
1MS-102	OFD-122B-1.1	J3	STP	MS Stop Valve 4	PERF/OPS	None	Q/SD
2MS-102	OFD-122B-2.1	J3	SV	MS Stop Valve 4	PERF/OPS	None	Q/SD
3MS-102	OFD-122B-3.1	J3	STP	MS Stop Valve 4	PERF/OPS	None	Q/SD
1MS-103	OFD-122B-1.1	J4	STP	MS Stop Valve 3	PERF/OPS	None	Q/SD
2MS-103	OFD-122B-2.1	J4	SV	MS Stop Valve 3	PERF/OPS	None	Q/SD
3MS-103	OFD-122B-3.1	J4	STP	MS Stop Valve 3	PERF/OPS	None	Q/SD
1MS-104	OFD-122B-1.1	J4	STP	MS Stop Valve 2	PERF/OPS	None	Q/SD
2MS-104	OFD-122B-2.1	J4	SV	MS Stop Valve 2	PERF/OPS	None	Q/SD
3MS-104	OFD-122B-3.1	J4	STP	MS Stop Valve 2	PERF/OPS	None	Q/SD
1MS-105	OFD-122B-1.1	J5	STP	MS Stop Valve 1	PERF/OPS	None	Q/SD
2MS-105	OFD-122B-2.1	J5	SV	MS Stop Valve 1	PERF/OPS	None	Q/SD
3MS-105	OFD-122B-3.1	J5	STP	MS Stop Valve 1	PERF/OPS	None	Q/SD
1MS-153	OFD-122A-1.1	J10	MAN	MS Line "A" Atmos Dump Blk Vlv Bypass	PERF	None	S/D
2MS-153	OFD-122A-2.1	J10	MAN	MS Line "A" Atmos Dump Blk Bypass	PERF	None	S/D
3MS-153	OFD-122A-3.1	J10	MAN	MS Line "A" Atmos Dump Blk Bypass	PERF	None	S/D
1MS-154	OFD-122A-1.1	J10	MAN	MS Line "A" Atmos Dump Isol Vlv	PERF	None	S/D

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2MS-154	OFD-122A-2.1	J10	MAN	MS Line "A" Atmos Dump Isol Vlv	PERF	None	S/D
3MS-154	OFD-122A-3.1	J10	MAN	MS Line "A" Atmos Dump Isol Vlv	PERF	None	S/D
1MS-155	OFD-122A-1.1	D10	MAN	MS Line "B" Atmos Dump Blk Vlv	PERF	None	S/D
2MS-155	OFD-122A-2.1	D10	MAN	MS Line "B" Atmos Dump Blk Vlv	PERF	None	S/D
3MS-155	OFD-122A-3.1	D10	MAN	MS Line "B" Atmos Dump Blk Vlv	PERF	None	S/D
1MS-156	OFD-122A-1.1	E10	MAN	MS Line "B" Atmos Dump Isol Vlv	PERF	None	S/D
2MS-156	OFD-122A-2.1	E10	MAN	MS Line "B" Atmos Dump Isol Vlv	PERF	None	S/D
3MS-156	OFD-122A-3.1	E10	MAN	MS Line "B" Atmos Dump Isol Vlv	PERF	None	S/D
1MS-161	OFD-122A-1.1	J9	MAN	MS Line "A" Atmos Dump Blk Vlv Byp	PERF	None	S/D
2MS-161	OFD-122A-2.1	J9	MAN	MS Line "A" Atmos Dump Blk Vlv Byp	PERF	None	S/D
3MS-161	OFD-122A-3.1	J9	MAN	MS Line "A" Atmos Dump Blk Vlv Byp	PERF	None	S/D
1MS-162	OFD-122A-1.1	K9	MAN	MS Line "A" Atmos Dump Control Vlv	PERF	None	S/D
2MS-162	OFD-122A-2.1	K9	MAN	MS Line "A" Atmos Dump Control Vlv	PERF	None	S/D
3MS-162	OFD-122A-3.1	K9	MAN	MS Line "A" Atmos Dump Control Vlv	PERF	None	S/D
1MS-163	OFD-122A-1.1	E9	MAN	MS Line "B" Atmos Dump Blk Vlv Byp	PERF	None	S/D
2MS-163	OFD-122A-2.1	E9	MAN	MS Line "B" Atmos Dump Blk Vlv Byp	PERF	None	S/D
3MS-163	OFD-122A-3.1	E9	MAN	MS Line "B" Atmos Dump Blk Vlv Byp	PERF	None	S/D
1MS-164	OFD-122A-1.1	E9	MAN	MS Line "A" Atmos Dump Control Vlv	PERF	None	S/D
2MS-164	OFD-122A-2.1	E9	MAN	MS Line "B" Atmos Dump Control Vlv	PERF	None	S/D
3MS-164	OFD-122A-3.1	E9	MAN	MS Line "B" Atmos Dump Control Vlv	PERF	None	S/D
1N-106	OFD-127B-1.2	E4	MAN	LP N2 Heater Outlet	PERF	RF	None
1N-107	OFD-127B-1.2	F4	MAN	LP N2 Heater Bypass	PERF	RF	None
1N-129	OFD-127B-1.2	G7	CK	Core Flood Tank "A" Supply Check	PERF	RF	RF
2N-129	OFD-127B-2.2	G7	CK	Core Flood Tank "A" Supply Check	PERF	RF	RF
3N-129	OFD-127B-3.2	G7	CK	Core Flood Tank "A" Supply Check	PERF	RF	RF
1N-131	OFD-127B-1.2	J7	CK	Core Flood Tank "B" Supply Check	PERF	RF	RF
2N-131	OFD-127B-2.2	J7	CK	Core Flood Tank "B" Supply Check	PERF	RF	RF
3N-131	OFD-127B-3.2	J7	CK	Core Flood Tank "B" Supply Check	PERF	RF	RF
1N-246	OFD-127B-1.2	E10	CK	LP HDR Check Valve	PERF	RF	None
2N-246	OFD-127B-2.2	E10	CK	LP HDR Check Valve	PERF	RF	None
3N-246	OFD-127B-3.2	E10	CK	LP HDR Check Valve	PERF	RF	None
1N-247	OFD-127B-1.2	E10	MAN	Penetration 49 Vent	PERF	RF	None
2N-247	OFD-127B-2.2	E10	MAN	Penetration 53 Vent	PERF	RF	None
3N-247	OFD-127B-3.2	E10	MAN	Penetration 53 Vent	PERF	RF	None
2N-263	OFD-127B-2.2	E7	MAN	Penetration Isolation LP Hdr	PERF	RF	None
3N-263	OFD-127B-3.2	E7	MAN	Penetration Isolation LP header	PERF	RF	None
1PR-1	OFD-116A-1.1	F3	EMO	RB Purge Outlet	PERF	RF	S/D
2PR-1	OFD-116A-2.1	G3	EMO	RB Purge Outlet	PERF	RF	S/D
3PR-1	OFD-116A-3.1	G3	EMO	RB Purge Outlet	PERF	RF	S/D
1PR-2	OFD-116A-1.1	F5	PST	RB Purge Outlet	PERF	RF	S/D
2PR-2	OFD-116A-2.1	G5	PST	RB Purge Outlet	PERF	RF	S/D
3PR-2	OFD-116A-3.1	G5	PST	RB Purge Outlet	PERF	RF	S/D
1PR-3	OFD-116A-1.1	F7	PST	RB Purge Control	PERF	None	S/D
2PR-3	OFD-116A-2.1	G7	PST	RB Purge Control	PERF	None	S/D
3PR-3	OFD-116A-3.1	G7	PST	RB Purge Control	PERF	None	S/D
1PR-4	OFD-116A-1.1	D7	PST	RB Purge Inlet	PERF	None	S/D
2PR-4	OFD-116A-2.1	D7	PST	RB Purge Inlet	PERF	None	S/D
3PR-4	OFD-116A-3.1	D7	PST	RB Purge Inlet	PERF	None	S/D
1PR-5	OFD-116A-1.1	D5	PST	RB Purge Inlet	PERF	RF	S/D
2PR-5	OFD-116A-2.1	D5	PST	RB Purge Inlet	PERF	RF	S/D
3PR-5	OFD-116A-3.1	D5	PST	RB Purge Inlet	PERF	RF	S/D
1PR-6	OFD-116A-1.1	D3	EMO	RB Purge Inlet	PERF	RF	S/D
2PR-6	OFD-116A-2.1	D3	EMO	RB Purge Inlet	PERF	RF	S/D
3PR-6	OFD-116A-3.1	D3	EMO	RB Purge Inlet	PERF	RF	S/D
1PR-7	OFD-116C-1.1	G3	EMO	RB Radiation Monitor	PERF	RF	QTR
2PR-7	OFD-116C-2.1	G3	EMO	RB Radiation Monitor	PERF	RF	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
3PR-7	OFD-116C-3.1	G3	EMO	RB Radiation Monitor	PERF	RF	QTR
1PR-8	OFD-116C-1.1	K3	AOV	RB Radiation Monitor	PERF	RF	QTR
2PR-8	OFD-116C-2.1	K3	AOV	RB Radiation Monitor	PERF	RF	QTR
3PR-8	OFD-116C-3.1	K3	AOV	RB Radiation Monitor	PERF	RF	QTR
1PR-9	OFD-116C-1.1	D2	EMO	RB Radiation Monitor	PERF	RF	QTR
2PR-9	OFD-116C-2.1	D2	EMO	RB Radiation Monitor	PERF	RF	QTR
3PR-9	OFD-116C-3.1	D2	EMO	RB Radiation Monitor	PERF	RF	QTR
1PR-10	OFD-116C-1.1	C4	AOV	RB Radiation Monitor	PERF	RF	QTR
2PR-10	OFD-116C-2.1	C4	AOV	RB Radiation Monitor	PERF	RF	QTR
3PR-10	OFD-116C-3.1	C4	AOV	RB Radiation Monitor	PERF	RF	QTR
1PR-15	OFD-116B-1.1	I11	EMO	PR Fan A Discharge	PERF	None	QTR
2PR-15	OFD-116B-2.1	I11	EMO	PR Fan A Discharge	PERF	None	QTR
3PR-15	OFD-116B-3.1	I11	EMO	PR Fan A Discharge	PERF	None	QTR
1PR-19	OFD-116B-1.1	E11	EMO	PR Fan B Discharge	PERF	None	QTR
2PR-19	OFD-116B-2.1	E11	EMO	PR Fan B Discharge	PERF	None	QTR
3PR-19	OFD-116B-3.1	E11	EMO	PR Fan B Discharge	PERF	None	QTR
1PR-20	OFD-116B-1.1	G8	AOV	PR Fan Suction Tie	PERF	None	RF
2PR-20	OFD-116B-2.1	G8	AOV	PR Fan Suction Tie	PERF	None	RF
3PR-20	OFD-116B-3.1	G8	AOV	PR Fan Suction Tie	PERF	None	RF
1PR-23	OFD-116C-1.1	J4	MAN	RB Sample Inlet Penet 60 Test	PERF	RF	None
3PR-23	OFD-116C-3.1	J4	MAN	RB Sample Inlet Penet 60 Test	PERF	RF	None
1PR-24	OFD-116C-1.1	J4	MAN	RB Sample Inlet (60)	PERF	RF	None
2PR-24	OFD-116C-2.1	J3	MAN	RB Sample PX (60)	PERF	RF	None
1PR-25	OFD-116C-1.1	C4	MAN	RB Hydrogen Purge Return (60)	PERF	RF	None
2PR-25	OFD-116C-2.1	C4	MAN	RB Hydrogen Purge Penet (61)	PERF	RF	None
3PR-25	OFD-116C-3.1	C4	MAN	RB Hydrogen Purge Return (61)	PERF	RF	None
1PR-27	OFD-116A-1.1	H5	MAN	RB Purge Exhaust Penet 20 Test	PERF	RF	None
2PR-27	OFD-116A-2.1	H5	MAN	RB Exhaust Penet 20 Test	PERF	RF	None
3PR-27	OFD-116A-3.1	H5	MAN	RB Purge Exhaust Penet 20 Test	PERF	RF	None
1PR-28	OFD-116A-1.1	H5	MAN	RB Purge Exhaust Penet 20 Test	PERF	RF	None
1PR-29	OFD-116A-1.1	C5	MAN	RB Purge Supply Penet 19 Test	PERF	RF	None
2PR-29	OFD-116A-2.1	C5	MAN	RB Supply Penet 19 Test	PERF	RF	None
3PR-29	OFD-116A-3.1	C5	MAN	RB Purge Supply Penet 19 Test	PERF	RF	None
1PR-30	OFD-116A-1.1	C5	MAN	RB Purge Supply Penet 19 Test	PERF	RF	None
1PR-34	OFD-116B-1.1	I11	CK	R.B. Pene. Rm. Fan "A" Exhaust Check	PERF	None	QTR
2PR-34	OFD-116B-2.1	I11	CK	RC Penetration Rm Fan "A" Exhaust Check	PERF	None	QTR
3PR-34	OFD-116B-3.1	I11	CK	Penetration Room Fan Outlet Check	PERF	None	QTR
1PR-35	OFD-116B-1.1	E11	CK	R.B. Pene. Rm. Fan "B" Exhaust Check	PERF	None	QTR
2PR-35	OFD-116B-2.1	E11	CK	RB Penetration Rm Fan Exhaust "B" Check	PERF	None	QTR
3PR-35	OFD-116B-3.1	E11	CK	Penetration Fan Outlet Check	PERF	None	QTR
1PR-59	OFD-116C-1.1	H2	EMO	H2 Recombiner Inlet	PERF	RF	QTR
2PR-59	OFD-116C-2.1	H3	EMO	H2 Recombiner Inlet	PERF	RF	QTR
3PR-59	OFD-116C-3.1	H3	EMO	H2 Recombiner Inlet	PERF	RF	QTR
1PR-60	OFD-116C-1.1	D3	EMO	H2 Recombiner Outlet	PERF	RF	QTR
2PR-60	OFD-116C-2.1	D3	EMO	H2 Recombiner Outlet	PERF	RF	QTR
3PR-60	OFD-116C-3.1	D3	EMO	H2 Recombiner Outlet	PERF	RF	QTR
1PR-61	OFD-116C-1.1	F9	MAN	Hydrogen Recombiner Outlet	PERF	None	QTR
2PR-61	OFD-116C-2.1	E9	MAN	Hydrogen Recombiner Test	PERF	None	QTR
3PR-61	OFD-116C-3.1	E9	MAN	H2 Recombiner Outlet	PERF	None	QTR
1PR-68	OFD-116C-1.1	J3	MAN	Rad Monit Inlet Drain (60)	PERF	RF	None
2PR-68	OFD-116C-2.1	J3	MAN	Rad Block Inlet Drain (60)	PERF	RF	None
3PR-68	OFD-116C-3.1	J3	MAN	Rad Monit Inlet Drain (60)	PERF	RF	None
1PR-69	OFD-116C-1.1	J10	MAN	Radiation Monitor Inlet Block	PERF	None	QTR
2PR-69	OFD-116C-2.1	J10	MAN	Radiation Monitor Inlet Block	PERF	None	QTR
3PR-69	OFD-116C-3.1	J10	MAN	Radiation Monitor Inlet Block	PERF	None	QTR
1PR-70	OFD-116C-1.1	D10	MAN	Radiation Monitor Outlet Block	PERF	None	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2PR-70	OFD-116C-2.1	D10	MAN	Radiation Monitor Outlet Block	PERF	None	QTR
3PR-70	OFD-116C-3.1	D10	MAN	Radiation Monitor Outlet Block	PERF	None	QTR
1PR-71	OFD-110A-1.3	K2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
2PR-71	OFD-110A-2.3	K2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
3PR-71	OFD-110A-3.3	K2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
1PR-72	OFD-110A-1.3	K2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
2PR-72	OFD-110A-2.3	K2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
3PR-72	OFD-110A-3.3	K2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
1PR-73	OFD-110A-1.3	J2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
2PR-73	OFD-110A-2.3	J2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
3PR-73	OFD-110A-3.3	J2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
1PR-74	OFD-110A-1.3	I2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
2PR-74	OFD-110A-2.3	I2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
3PR-74	OFD-110A-3.3	I2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
1PR-75	OFD-110A-1.3	H2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
2PR-75	OFD-110A-2.3	H2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
3PR-75	OFD-110A-3.3	H2	SOV	H2 Analyzer "A" Sample Select	PERF	None	QTR
1PR-76	OFD-110A-1.3	E2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
2PR-76	OFD-110A-2.3	F2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
3PR-76	OFD-110A-3.3	F2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
1PR-77	OFD-110A-1.3	E2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
2PR-77	OFD-110A-2.3	F2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
3PR-77	OFD-110A-3.3	F2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
1PR-78	OFD-110A-1.3	E2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
2PR-78	OFD-110A-2.3	E2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
3PR-78	OFD-110A-3.3	E2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
1PR-79	OFD-110A-1.3	D2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
2PR-79	OFD-110A-2.3	D2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
3PR-79	OFD-110A-3.3	D2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
1PR-80	OFD-110A-1.3	C2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
2PR-80	OFD-110A-2.3	C2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
3PR-80	OFD-110A-3.3	C2	SOV	H2 Analyzer "B" Sample Select	PERF	None	QTR
1PR-81	OFD-110A-1.3	J6	SOV	H2 Analyzer "A" Sample Select	PERF	RF	QTR
2PR-81	OFD-110A-2.3	J6	SOV	H2 Analyzer "A" Sample Select	PERF	RF	QTR
3PR-81	OFD-110A-3.3	J6	SOV	H2 Analyzer "A" Sample Select	PERF	RF	QTR
1PR-84	OFD-110A-1.3	K6	SOV	H2 Analyzer "A" Return	PERF	RF	QTR
2PR-84	OFD-110A-2.3	K6	SOV	H2 Analyzer "A" Return	PERF	RF	QTR
3PR-84	OFD-110A-3.3	K6	SOV	H2 Analyzer "A" Return	PERF	RF	QTR
1PR-87	OFD-110A-1.3	E6	SOV	H2 Analyzer "B" Inlet	PERF	RF	QTR
2PR-87	OFD-110A-2.3	E6	SOV	H2 Analyzer "B" Inlet	PERF	RF	QTR
3PR-87	OFD-110A-3.3	E6	SOV	H2 Analyzer "B" Inlet	PERF	RF	QTR
1PR-90	OFD-110A-1.3	F6	SOV	H2 Analyzer "B" Return	PERF	RF	QTR
2PR-90	OFD-110A-2.3	F6	SOV	Hydrogen Analyzer "B" Return	PERF	RF	QTR
3PR-90	OFD-110A-3.3	F6	SOV	H2 Analyzer "B" Return	PERF	RF	QTR
1RC-1	OFD-100A-1.2	H10	SOV	Pressurizer spray control	PERF	None	S/D
2RC-1	OFD-100A-2.2	H10	SOV	Pressurizer spray control	PERF	None	S/D
3RC-1	OFD-100A-3.2	H10	SOV	Pressurizer spray control valve	PERF	None	S/D
1RC-4	OFD-100A-1.2	J9	EMO	Block Valve for PORV	PERF	None	QTR
2RC-4	OFD-100A-2.2	J9	EMO	Block Valve for PORV	PERF	None	QTR
3RC-4	OFD-100A-3.2	J9	EMO	Block Valve for PORV	PERF	None	QTR
1RC-5	OFD-110A-1.1	I3	EMO	Pressure Steam Sample	PERF	RF	QTR
2RC-5	OFD-110A-2.1	I3	EMO	Pressurizer Steam Sample	PERF	RF	QTR
3RC-5	OFD-110A-3.1	I3	EMO	Pressurizer Sample	PERF	RF	QTR
1RC-6	OFD-110A-1.1	H3	EMO	Pressure Sample	PERF	RF	QTR
2RC-6	OFD-110A-2.1	H3	EMO	Pressurizer Sample	PERF	RF	QTR
3RC-6	OFD-110A-3.1	H3	EMO	Pressurizer Sample	PERF	RF	QTR

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
1RC-7	OFD-110A-1.1	I6	PST	Pressure Sample	PERF	RF	QTR
2RC-7	OFD-110A-2.1	I6	PST	Pressurizer Sample	PERF	RF	QTR
3RC-7	OFD-110A-3.1	I6	PST	Pressurizer Sample	PERF	RF	QTR
1RC-49	OFD-110A-1.1	J5	MAN	Pressure Sample Penet 1 Vent	PERF	RF	None
2RC-49	OFD-110A-2.1	J5	MAN	Loop "B2" Drain PX (58)	PERF	RF	None
3RC-49	OFD-110A-3.1	J5	MAN	Loop "B2" Drain Px(58)	PERF	RF	None
1RC-50	OFD-110A-1.1	I5	MAN	Pressure Sample Penet 1 Drain	PERF	RF	None
2RC-50	OFD-110A-2.1	I5	MAN	Press Sample Penet (58) Drain	PERF	RF	None
3RC-50	OFD-110A-3.1	I5	MAN	Pressure Sample Penet 58 Drain	PERF	RF	None
1RC-51	OFD-110A-1.1	J5	MAN	Pressure Sample Penet 1 PX	PERF	RF	None
2RC-51	OFD-110A-2.1	J5	MAN	Press Sample Penet (58) Drain	PERF	RF	None
1RC-66	OFD-100A-1.2	J9	RV	Power Operated Relief Valve (PORV)	OPS	None	S/D
2RC-66	OFD-100A-2.2	J9	RV	PORV (Power Operated Relief Valve)	OPS	None	S/D
3RC-66	OFD-100A-3.2	J9	RV	PORV (Power Operated Relief Valve)	OPS	None	S/D
1RC-67	OFD-100A-1.2	J8	RV	Pressurizer Relief	MAINT	None	RF
2RC-67	OFD-100A-2.2	J8	RV	Pressurizer Relief Valve	MAINT	None	RF
3RC-67	OFD-100A-3.2	J8	RV	Pressurizer Relief Valve	MAINT	None	RF
1RC-68	OFD-100A-1.2	J7	RV	Pressurizer Relief	MAINT	None	RF
2RC-68	OFD-100A-2.2	J7	RV	Pressurizer Relief Valve	MAINT	None	RF
3RC-68	OFD-100A-3.2	J7	RV	Pressurizer Relief Valve	MAINT	None	RF
1RC-155	OFD-100A-1.1	I4	SOV	Loop "A" High Point Vent	PERF	None	RF
2RC-155	OFD-100A-2.1	J4	SOV	Loop "A" High Point Vent	PERF	None	RF
3RC-155	OFD-100A-3.1	J4	SOV	Loop "A" High Point Vent	PERF	None	RF
1RC-156	OFD-100A-1.1	J4	SOV	Loop "A" High Point Vent Block	PERF	None	RF
2RC-156	OFD-100A-2.1	J4	SOV	Loop "A" High Point Vent Block Valve	PERF	None	RF
3RC-156	OFD-100A-3.1	J4	SOV	Loop "A" High Point Vent Block Valve	PERF	None	RF
1RC-157	OFD-100A-1.1	I12	SOV	Loop "B" High Point Vent	PERF	None	RF
2RC-157	OFD-100A-2.1	I11	SOV	Loop "B" High Point Vent	PERF	None	RF
3RC-157	OFD-100A-3.1	I12	SOV	Loop "B" High Point Vent	PERF	None	RF
1RC-158	OFD-100A-1.1	I11	SOV	Loop "B" High Point Vent Block	PERF	None	RF
2RC-158	OFD-100A-2.1	I11	SOV	Loop "B" High Point Vent Block Valve	PERF	None	RF
3RC-158	OFD-100A-3.1	I11	SOV	Loop "B" High Point Vent Block Valve	PERF	None	RF
1RC-159	OFD-100A-1.1	I9	SOV	Reactor Vessel Head Vent	PERF	None	RF
2RC-159	OFD-100A-2.1	I9	SOV	Reactor Vessel Head Vent	PERF	None	RF
3RC-159	OFD-100A-3.1	I9	SOV	RV Head Vent	PERF	None	RF
1RC-160	OFD-100A-1.1	I9	SOV	Reactor Vessel Head Vent Block	PERF	None	RF
2RC-160	OFD-100A-2.1	I9	SOV	Reactor Vessel Head Vent Block Valve	PERF	None	RF
3RC-160	OFD-100A-3.1	I9	SOV	RV Head Vent Block Valve	PERF	None	RF
1RC-164	OFD-110A-1.4	G4	SOV	Post Accident Sample Valve	PERF	RF	QTR
2RC-164	OFD-110A-2.4	G4	SOV	PALS Sample Valve	PERF	RF	QTR
3RC-164	OFD-110A-3.4	G4	MAN	PALS Sample Valve	PERF	RF	QTR
1RC-165	OFD-110A-1.4	G4	SOV	Post Accident Sample Valve	PERF	RF	QTR
2RC-165	OFD-110A-2.4	G4	SOV	PALS Sample Valve	PERF	RF	QTR
3RC-165	OFD-110A-3.4	G4	MAN	PALS Sample Valve	PERF	RF	QTR
1SF-60	OFD-104A-1.1	D3	MAN	Canal Fill Penetration (56) BLOCK	PERF	ILRT	None
3SF-60	OFD-104A-3.1	C5	MAN	Canal Fill Penetration (56) Block	PERF	ILRT	None
1SF-61	OFD-104A-1.1	D3	MAN	Canal Fill Penetration (56) BLOCK	PERF	ILRT	None
2SF-61	OFD-104A-1.1	D12	MAN	Canal Fill Penetration (56) Block	PERF	ILRT	None
3SF-61	OFD-104A-3.1	C4	MAN	Canal Fill Penetration (56) Block	PERF	ILRT	None
1SF-72	OFD-104A-1.1	J3	MAN	Transfer Tube "A" Drain to Sump	PERF	RF	None
2SF-72	OFD-104A-1.1	D3	MAN	Transfer "A" Drain to Sump	PERF	RF	None
3SF-72	OFD-104A-3.1	J4	MAN	Transfer Tube "A" Drain to Sump	PERF	RF	None
1SF-73	OFD-104A-1.1	J3	MAN	Transfer Tube "B" Drain to Sump	PERF	RF	None
2SF-73	OFD-104A-1.1	J12	MAN	Transfer Tube "B" Drain to Sump	PERF	RF	None
3SF-73	OFD-104A-3.1	J5	MAN	Transfer Tube "B" Drain to Sump	PERF	RF	None
1SF-74	OFD-104A-1.1	I3	MAN	Transfer Tube Drain Block	PERF	RF	None

ILRT = Tested only during ILRT outages

RF = Tested only during refueling outages

S/D = Tested during cold shutdowns and refueling outages

QTR = Tested quarterly

Q/SD = Partial stroked quarterly and full stroked at cold shutdown and refueling

Q/RF = Partial stroked quarterly and full stroked at refueling

S/RF = Partial stroked at cold shutdown and full stroked at refueling

VALVE	OFD	COOR	TYPE	FUNCTION	RESP	LEAK TEST	STROKE TEST
2SF-74	OFD-104A-1.1	I12	MAN	Transfer Tube Drain Block	PERF	RF	None
3SF-74	OFD-104A-3.1	I5	MAN	Transfer Tube Drain Block	PERF	RF	None
1SF-76	OFD-104A-1.1	D3	MAN	Penetration 56 Drain	PERF	ILRT	None
2SF-76	OFD-104A-1.1	D12	MAN	Penetration 56 Drain	PERF	ILRT	None
3SF-76	OFD-104A-3.1	C4	MAN	Penetration 56 Drain	PERF	ILRT	None
2SF-81	OFD-104A-1.1	D12	MAN	Canal Fill Penetration (56) Block	PERF	ILRT	None
1SF-82-SSF	OFD-101A-1.5	F2	EMO	RC Makeup Pump Suction	PERF	RF	QTR
2SF-82-SSF	OFD-101A-2.5	F2	EMO	RC Makeup Pump Suction	PERF	RF	QTR
3SF-82-SSF	OFD-101A-3.5	F2	EMO	RC Makeup Pump Suction	PERF	RF	QTR
2SF-87	OFD-104A-1.1	D12	MAN	PENETRATION 56 VENT	PERF	ILRT	None
3SF-87	OFD-104A-3.1	D4	MAN	PENETRATION 56 VENT	PERF	ILRT	None
1SF-97-SSF	OFD-104A-1.1	K3	EMO	RC Makeup Pump Suction	PERF	RF	QTR
2SF-97-SSF	OFD-104A-1.1	K12	EMO	RC Makeup Pump Suction	PERF	RF	QTR
3SF-97-SSF	OFD-104A-3.1	K3	EMO	SFP to RC Makeup Pump Suction	PERF	RF	QTR
1SF-98-SSF	OFD-104A-1.1	K3	MAN	SFP to RC Makeup Pump Vent (11)	PERF	RF	None
2SF-98-SSF	OFD-104A-1.1	K12	MAN	SFP to RC Makeup Pump Vent (11)	PERF	RF	None
3SF-98-SSF	OFD-104A-3.1	K3	MAN	SFP to RC Makeup Vent (11)	PERF	RF	None
1SF-99-SSF	OFD-101A-1.5	E2	MAN	SFP to RC Makeup Pump Drain (11)	PERF	RF	None
2SF-99-SSF	OFD-101A-2.5	E2	MAN	SFP to RC Makeup Pump Drain (11)	PERF	RF	None
3SF-99-SSF	OFD-101A-3.5	F2	MAN	SFP to RC Makeup Drain (11)	PERF	RF	None
1V-186	OFD-121C-1.1	I14	EMO	Main Condenser Vacuum Breaker	PERF	None	S/D
2V-186	OFD-121C-2.1	I14	EMO	Main Condenser Vacuum Breaker	PERF	None	S/D
3V-186	OFD-121C-3.1	I14	EMO	Main Condenser Vacuum Breaker	PERF	None	S/D
U1 RV CHECKS	N/A		CK	Eight Interval RV Checks	MAINT	None	RF
U2 RV CHECKS	N/A		CK	Eight Internal RV Checks	MAINT	None	RF
U3 RV CHECKS	N/A		CK	Eight Internal RV Checks	MAINT	None	RF

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S/RF = Partial stroked at cold shutdown and full stroked at refueling