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ILLINOIS POWER COMPANY

CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

June 30, 1987

Docket No. 50-461

Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Clinton Power Station
Inservice Testing Program

Dear Sir:

Attached are responses to Dr. Walter R. Butler's February 6, 1987, letter to Mr. Frank A. Spangenberg on the Inservice Testing Program (IST). Also, a revised Pump and Valve Testing Program, relief request matrix which cross references the previous and current relief requests, revised relief requests, and a listing of additional changes made to the program plan which were not discussed in the responses to the NRC items are attached. Illinois Power will now implement this revised IST Program.

If you have any questions on this material, please contact me.

Sincerely yours,

F. A. Spangenberg, III
Manager - Licensing and Safety

DWW/krm

Attachments

cc: B. L. Siegel, NRC Clinton Licensing Project Manager
NRC Resident Office
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety

A001
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RESPONSE TO NRC ITEMS

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
	1. VALVE TESTING PROGRAM
A.1	Previous response is adequate. No Inservice Testing (IST) Program changes.
A.2	All valves that are Appendix J, Type C, leak rate tested are listed in Clinton Power Station (CPS) Technical Specification Table 3.6.4-1. These valves (except vent valves, drain valves, manual isolation valves, etc. which are exempt per Section XI, Paragraph IWV-1200) have been listed as Category A or A/C in the IST Program. The leak rate was added as a required test for these valves.
A.3	Containment isolation valves that are Appendix J, Type B or Type C, and within the reactor coolant boundary are individually leak rate tested in accordance with the Code. Containment isolation valves that are Appendix J, Type B or Type C, but are not within the reactor coolant boundary and can be individually tested, are tested in accordance with 10CFR50 Appendix J. Containment isolation valves which cannot be individually tested (except Excess Flow Check Valves), are tested by utilizing the maximum permissible leakage rate for a specific containment penetration (inboard and outboard valves combined) instead of a leakage rate for individual valves as required by IWV-3426, Analysis of Leakage Rates. See Relief Request 2011 (previously 056) for justification. Excess flow check valves are not required to be leak rate tested (Type B or Type C) per CPS Technical Specification. However, excess flow check valves are included within the Integrated Leak Rate Test (ILRT) boundaries. No separate test either by individual valve or by penetration will be performed on these valves. See Relief Request 2011 (previously 056). Relief Request 2011 also provides justification for relief from the requirements of IWV-3423, Differential Test Pressure, for all containment isolation valves except those which serve as reactor coolant boundary valves. All containment isolation valves comply with the staff position except those identified in Relief Request 2011.
A.4	The response to this item is provided in the response to Item A.2.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
A.5	Previous response is adequate. No IST Program changes.
A.6	Previous response is adequate. Relief Request 2016 provides the guidelines for valve testing during cold shutdowns. The justification for the cold shutdown testing frequency is provided in the individual item responses.
A.7	The IST Program format has been clarified by specifying the frequency of each test.
A.8	Previous response is adequate. No IST Program changes.
A.9	The IST Program has been revised to verify all remote position indicators every 2 years.
A.10	When a check valve is exercised by use of fluid flow through the valve, the flow rate value specified in the CPS Technical Specification and/or the CPS FSAR is utilized to verify the valve's operability. When the flow rate value is not specified in the CPS Technical Specification and/or the CPS FSAR, the valve is exercised by proving that the disk moves promptly away from the seat.
A.11	Previous response is adequate. No IST Program changes.
A.12	Valves 1DG007A-D/G/H/J/K have been removed from the system. Valves 1DG007E/F and 1DG008A-H/J/K have been deleted from the IST Program (see response to Items I.1 and I.3 for the detailed justification). Valves 1DO001A/B/C, 1SX006C and 1SX063A/B were included in the IST Program in Revision 1 and are tested quarterly.
A.13	These check valves (1FC018A/B, 020A/B, 022A/B, 073, 077 and 096) perform a safety function in the open direction and have been added to the IST Program for quarterly testing.
A.14	In addition to the previous response, the only valves that are partial exercised quarterly are 1B21-F022 A/B/C/D and 1B21-F028 A/B/C/D which are addressed in the response to Item B.1.

For valves identified for testing during cold shutdowns, testing will be performed both during cold shutdowns and refueling outages. However, when valves are identified for testing during refueling outages, testing will be performed during refueling outages only.

B.1

Full-stroke exercising the Main Steam Isolation Valves (1B21-F022A/B/C/D and 1B21-F028A/B/C/D) during normal operation would increase the possibility of main steam line isolation due to high flow in the other lines and could cause a plant shutdown. In addition, closing these valves with full steam flow would degrade the valve seats by throttling the steam flow, create thermal transients on the main steam lines, and increase the challenges to the Reactor Protection System.

The MSIVs are designed for partial exercising with full steam flow during plant operation. This partial exercising will verify the operability of the valve and operator.

These valves will be partial-stroke exercised quarterly and full-stroke exercised during cold shutdowns and refueling outages.

The IST Program has been revised to add the quarterly partial exercise test and to change the test frequency of the stroke time, exercise, and loss of power test from refueling to cold shutdown.

Relief Request 053 has been deleted.

B.2

Previous response is adequate. No IST Program changes.

B.3

In addition to the previous response, Relief Requests 015 and 016 have been deleted.

B.4

These Air Accumulator Supply Check Valves (1B21-F024A/B/C/D, 1B21-F029A/B/C/D, 1B21-F036A/F/G/J/L/M/N/P/R, 1B21-F039B/C/D/E/H/K/S, 1B21-F433A/B and 1IA042A/B) prevent depressurization of the air accumulators on a loss of Instrument Air. Exercising these check valves would require isolating the air supply to the accumulators. This could prevent the Safety Relief Valves and Main Steam Isolation Valves from performing their design function. Failure of these check valves during exercising could depressurize the accumulators and lead to opening the SRVs and/or closing the MSIVs resulting in a plant shutdown.

	These valves will be exercised during cold shutdowns and refueling outages. The IST Program has been revised to change the testing frequency from refueling to cold shutdown for these valves. Relief Request 042 has been deleted.
B.5 (Action Item)	Repeatable and representative stroke times can be measured for the ADS valves (1B21-F041B/C/D/F, 1B21-F047A/C and 1B21-F051G). The IST Program has been revised to change them from Category C to B/C valves and to identify their required tests as exercise, stroke time, and loss of power during refueling outages. Relief Request 2012 (previously 057) describes the alternate testing to be utilized and provides the technical justification.
B.6	Valves 1B21-F098A/B/C/D perform no safety function. These valves have been deleted from the IST Program and Relief Request 005 has been deleted.
B.7	Previous response is adequate. No IST Program changes.
B.8 (Action Item)	Valves 1B21-F010A/B and F032A/B cannot be exercised closed during cold shutdowns. The technical justification for only testing these valves during refueling outages is provided in Relief Request 2001 (previously 001).
B.9	Valves 1B21-F001 and F002 are Reactor Pressure Vessel (RPV) vent valves. These valves are Category A passive valves since they are not required to change position in order to perform a safety function and have been identified as such in the IST Program. They are the only passive valves in the IST Program.
B.10 (Action Item)	These vacuum relief valves (1B21-F037A-H/J-N/P/R/S, 1B21-F040, 1B21-F078A-H/J-N/P/R/S, and 1B21-F379A-H/J-N/P/Q/R) prevent drawing a vacuum in the Safety Relief Valve discharge and vent lines following relief valve operation. These valves are located inside the drywell and are inaccessible during normal plant operations. These vacuum breakers are normally closed during plant operation. Exercising these valves during power operation would have adverse personnel safety implications and would present ALARA concerns.

	These valves will be exercised during cold shutdowns and refueling outages. The IST Program has been revised to change their testing frequency to cold shutdown from refueling. Relief Request 003 has been deleted.
B.11 (Action Item)	These Feedwater RPV Inlet Isolation Valves (1B21-F065A/B) isolate the feedwater flow to the Reactor Pressure Vessel (RPV). Exercising these valves during plant operation would interrupt the flow of feedwater to the RPV. Isolation of one line of feedwater flow during normal operation would introduce undesirable operational transients and could result in a reactor trip. Partial stroke testing cannot be performed since these valves stroke fully on initiation. These valves will be exercised and stroke timed during cold shutdowns and refueling outages. The IST Program has been revised to change the testing frequency to cold shutdown from refueling. Relief Request 004 has been deleted.
C.1	Previous response is adequate. No IST Program changes.
C.2	Previous response is adequate. No IST Program changes.
D.1	Previous response is adequate. Valves 1CC188A/B have been deleted from the IST Program.
D.2	Previous response is adequate. Valves 1CC065, 067, 068 and 070 have been deleted from the IST Program.
D.3 (Action Item)	These component cooling valves (1CC049, 050, 053, 054, 057, 060, 127 and 128) isolate the Component Cooling System supply to containment and return from containment. These valves are normally open during plant operation. Exercising these valves would eliminate cooling water to the Reactor Recirculation Pumps and the Non-regenerative Heat Exchangers. Elimination of cooling water to these components during plant operation would result in premature failure of the Reactor Recirculation Pump seals and undesired thermal shocks to the Non-regenerative Heat Exchangers. Partial stroke testing cannot be performed since these valves stroke fully on initiation.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
	These valves will be exercised and stroke timed during cold shutdowns and refueling outages. The IST Program has been revised to change the testing frequency of these valves to cold shutdown from refueling. Relief Request 019 has been deleted.
D.4	Previous response is adequate. These valves (1CC065, 067, 068, 070 and 188A/B) have been deleted from the IST Program and Relief Request 036 has been deleted.
D.5	Previous response is adequate. No IST Program changes.
E.1	Previous response is adequate. See Relief Request 2006 (previously 037).
E.2	The IST Program was revised to change valves 1CM011, 012, 022, 023, 025, 026, 047 and 048 from Category B to A (containment isolation valves). The IST Program has been revised to identify the tests required as stroke time, loss of power, and exercise at a frequency of quarterly for all valves that were in Relief Request 032 and Relief Request 032 has been deleted. Relief Request 2013 (previously 058) has been initiated to eliminate the trending requirements for these rapid acting solenoid valves.
E.3	Valves 1CM066 and 067 can be and are tested quarterly. The IST Program has been revised to indicate this and they have been deleted from Relief Request 037.
F.1	Previous response is adequate. No IST Program changes.
G.1 (Open Item)	The hydraulic control unit air operated valves 126, 127 and 139 and check valves 114, 115 and 138 (145 of each valve) perform a safety function. These valves are not ASME Class 1, 2, or 3 valves and therefore do not fall within the scope of this program. However, these valves are tested as follows:

All valves except 115

CPS Technical Specification 4.1.3.2 requires performance of scram insertion time testing and single control rod scram time testing with the reactor coolant pressure greater than or equal to 950 psig with the Control Rod Drive Pumps isolated from the accumulators as follows:

1) For all control rods, prior to thermal power exceeding 40% of rated thermal power following core alterations or after the reactor has been shutdown for more than 120 days.

2) For at least 10% of the control rods, on a rotating basis, at least once per 120 days of power operation.

Valve 115

CPS FSAR requires that check valve 115 be periodically tested to ensure the operability. Testing of this valve will be performed during refueling outages by securing the Control Rod Drive Pumps and verifying that these valves are closed by monitoring the accumulators' low pressure alarm.

Relief Request 059 has been deleted.

G.2

Previous response is adequate. No IST Program changes.

G.3

Previous response is adequate. No IST Program changes.

G.4
(Action Item)

Valve 1C11-F083

Control Rod Drive (CRD) Pump Discharge Isolation Valve (1C11-F083) is a containment isolation valve. Failure of this valve in the closed position during exercising would result in a loss of drive water to the Control Rods and seal flow to the Reactor Recirculation Pumps. This would inhibit normal operation of the Control Rods and could result in a reactor shutdown. Isolating the cooling water could also result in damage to the Reactor Recirculation Pump seals. This valve strokes fully on initiation and cannot be partial-stroke tested.

This valve will be exercised and stroke timed during cold shutdowns and refueling outages.

The IST Program has been revised to change this valve from Category B to A and to change its testing frequency to cold shutdown from refueling.

Relief Request 008 has been deleted.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
	Valve 1C11-F122 (Action Item) This CRD Water Header check valve (1C11-F122) cannot be tested during normal operation or cold shutdown. See Relief Request 2002 (previously 010) for the detailed justification. This valve was changed from Category C to A/C in the IST Program.
H.1	Previous response is adequate. See Relief Request 2003 (previously 011).
H.2	Previous response is adequate. No IST Program changes.
H.3	Previous response is adequate. No IST Program changes.
H.4	Previous response is adequate. No IST Program changes.
I.1	Valves 1DG007A-D/G/H/J/K have been removed from the system and deleted from the IST Program. Valves 1DG007E/F perform an active safety function. However, they are not ASME Class 1, 2, or 3 valves and do not fall within the scope of this program. Their operability is assured by the monthly diesel generator surveillance test required by CPS Technical Specification 4.8.1.1.2(a). These valves have been deleted from the IST Program and Relief Request 038.
I.2 (Action Item)	These valves (1DG168, 169, 170, 171, 172 and 173) perform an active safety function. However, they are not ASME Class 1, 2, or 3 valves and do not fall within the scope of this program. The operability of these valves is assured by the monthly diesel generator surveillance test, required by CPS Technical Specification 4.8.1.1.2(a). No IST Program changes are required.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
I.3 (Action Item)	CPS has not received written direction from the NRC concerning inclusion of emergency diesel generator subsystems in the IST Program. These Diesel Start Valves (1DG008 A-H/J/K) perform an active safety function. However, they are not ASME Class 1, 2, or 3 valves and do not fall within the scope of this program. The operability of these valves is assured by the monthly diesel generator surveillance test, required by CPS Technical Specification 4.8.1.1.2(a). These valves have been deleted from the IST Program and Relief Request 038 has been deleted since valves 1DG007E/F were deleted per Item I.1.
J.1	Previous response is adequate. No IST Program changes.
J.2	Previous response is adequate. No IST Program changes.
J.3	Valves 1E12-F026 A/B, F051 A/B, F052 A/B, F065 A/B and F087 A/B are in the flow path of the steam condensing mode of the RHR System. The steam condensing mode of operation is not required for the safe shutdown of the plant. However, all of these valves except 1E12-F051 A/B and F065 A/B are required to close to allow Low Pressure Core Injection systems operation which is a safety function. All of these valves are included in the IST Program as Category B valves except 1E12-F051 A/B and F065 A/B. Valves 1E12-F051 A/B and F065 A/B are pressure regulating valves which are exempt from testing per IWV-1200(a) and have been deleted from the IST Program.
J.4	This valve (1E12-F095) is addressed in Relief Request 2007 (previously 045) which requests relief from the stroke time test. Valves 1E12-F060A/B and 1E12-F075A/B have been deleted from Relief Request 2007 (previously 045). Also, valve 1E12-F095 was changed from Class 2 to 3 in the IST Program.

J.5

This Residual Heat Removal (RHR) to RPV Head Spray Check Valve (1E12-F019) prevents backflow from the Reactor Pressure Vessel into the RHR System. This valve is designed to be exposed to the Reactor Pressure Vessel pressure. During normal reactor operation, the RHR mode of operation which provides cooling water to the RPV through Reactor Core Isolation Cooling (RCIC) head spray is in standby. Exercising this valve with a mechanical exerciser during normal reactor operation with a differential pressure equivalent to the reactor pressure across the disk would result in damage to the valve. Therefore, this valve cannot be exercised quarterly. This valve can be exercised during cold shutdowns since the reactor pressure will be less than the RHR system pressure.

This valve will be exercised during cold shutdowns and refueling outages. The IST Program was revised to change the testing frequency from quarterly to cold shutdowns.

Relief Request 066 has been deleted.

J.6
(Action Item)

The air operators on valves 1E12-F041A/B/C do not fully stroke these check valves. CPS will disconnect the air operators during the first refueling outage so that the valves can be full-stroke exercised by utilizing a mechanical exerciser.

Relief Request 2014 (previously 060) has been initiated to request relief from fully stroking these valves in the interim period until the air operators are disconnected.

These valves are pressure isolation valves. There are two pressure isolation valves in each piping line between the high pressure Reactor Coolant System and the low pressure RHR system. Testing any of these valves during normal operation would result in a loss of one isolation barrier. This could cause an inter-system Loss of Coolant Accident (LOCA) and damage low pressure system piping with the potential for release of reactor coolant outside the primary containment.

Therefore, these valves will be partially exercised during cold shutdowns and refueling outages until the air operators are disconnected. After the air operators are disconnected, full-stroke exercising of these valves will be performed by utilizing a mechanical exerciser during cold shutdowns and refueling outages.

The IST Program has been revised to change from exercising during refueling outages to partial exercising during cold shutdowns.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
J.7	Valves 1E12-F046A/B/C are check valves installed in minimum flow lines. These valves are tested by ensuring that they open to the point necessary to provide design minimum flow.
J.8 (Open Item)	Valves 1E12-F084A/B/C and 1E12-F085A/B/C perform safety functions in both the open and the closed positions. The open position is verified quarterly by observation that the low discharge pressure alarm on Panel 1H13-P601 is cleared. Since the Waterleg Pump discharge check valves are check and stop check valves in series, an alternate testing method is required to test their closure individually. See Relief Request 2015 (previously 061) for the testing method and frequency for individually verifying closure of these valves.
J.9	Previous response is adequate. No IST Program changes.
J.10	Previous response is adequate. No IST Program changes.
J.11 (Action Item)	The valves in Relief Request 054 are pressure isolation valves between the high pressure Reactor Coolant System and various low pressure systems (e.g. RHR, LPCS, HPCS and RCIC). Valves 1E12-F008, F009, F023, F041A/B/C, F042A/B/C, F053A/B; 1E21-F005, F006; 1E22-F004, F005; 1E51-F013, F066: There are two pressure isolation valves in each piping line between the high pressure Reactor Coolant System and low pressure systems (ECCS and RCIC). Testing any of these valves during normal operation would result in a loss of one isolation barrier. This could cause an inter-system Loss of Coolant Accident (LOCA) and damage low pressure system piping with the potential for release of reactor coolant outside the primary containment. Therefore, these valves cannot be tested during normal operation. These valves can be tested during cold shutdowns since reactor pressure will be less than RHR system pressure. These valves will be exercised and stroke timed during cold shutdowns and refueling outages. The IST Program was revised to change the frequency of these tests to cold shutdowns from refueling outages. These valves were deleted from Relief Request 054.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
	Valves 1E12-F050A/B These valves cannot be tested during normal operation or cold shutdowns and are addressed in Relief Request 2010 (previously 054) which provides the detailed justification for not testing these valves during normal operation or cold shutdowns.
J.12	Valves 1E12-F037A/B are containment isolation valves and have been included in the IST Program as Category A valves. Exercise and stroke time tests will be performed on these valves quarterly.
J.13	The IST Program has been revised to identify the tests required as stroke time, loss of power and exercise at a frequency of quarterly for valves 1E12-F060 A/B and F075 A/B and they have been deleted from Relief Request 045. 1E12-F095 is now the only valve in Relief Request 2007 (previously 045) which requests relief from the stroke time test. Valves 1E12-F060 A/B and F075 A/B are included in Relief Request 2013 (previously 058) which eliminates the trending requirements for these rapid acting valves.
K.1 (Action Item)	See response to Item J.6. This valve (1E21-F006) is also included in Relief Request 2014 (previously 060) which describes the testing method and frequency for this check valve.
K.2	This valve (1E21-F005) is included in the response to Item J.11. This valve will be full-stroke exercised and stroke timed during cold shutdowns and refueling outages. It has been deleted from Relief Request 054.
K.3 (Open Item)	See response to Item J.8. These valves (1E21-F033 and F034) are also included in Relief Request 2015 (previously 061) which describes the testing method and frequency for individually verifying closure of these valves.
K.4	Previous response is adequate. No IST Program changes.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
K.5	Valve 1E21-F306 supplies the flushing water to the Low Pressure Core Spray system from the Cycled Condensate system which is not a safety function. Therefore, this valve has been deleted from the IST Program. Relief Request 041 has also been deleted.
L.1 (Action Item)	See response to Item J.6. This valve (1E22-F005) is also included in Relief Request 2014 (previously 060) which describes the testing method and frequency for this check valve.
L.2 (Open Item)	See response to Item J.8. These valves (1E22-F006 and F007) are also included in Relief Request 2015 (previously 061) which describes the testing method and frequency for individually verifying closure of these valves.
L.3	Previous response is adequate. Valve 1E22-F332 is now included in Relief Request 2006 (previously 037). The IST Program was revised to change its testing frequency from quarterly to refueling outages.
L.4	Previous response is adequate. No IST Program changes.
M.1	Previous response is adequate. These valves (1E31-F016 and F019) have been deleted from the IST Program. Relief Request 040 has also been deleted.
M.2	The IST Program has been revised to identify the tests required as stroke time, loss of power, and exercise at a frequency of quarterly for valves 1E31-F014, 015, 017 and 018. Relief Request 033 has been deleted. Relief Request 2013 (previously 058) has been initiated to eliminate the stroke time trending requirements for these rapid acting valves.

N.1

These valves (1E32-F010, F011 and F315A/B/C/D) perform a safety function in both the closed and open positions. These valves are closed to allow the MSIV leakage control blowers to obtain the required negative pressure on the MSIV headers. These valves will be verified to close during the system operability test performed during cold shutdowns. Testing these valves quarterly would require disassembly of portions of downstream piping components since these valves do not have any actuators or hand levers. Therefore, these valves will be tested during cold shutdowns and refueling outages.

O.1

Valves 1E51-F061 and F062 perform a safety function in the open direction to allow the Waterleg Pump to fill the RCIC piping. There is no safety function in the closed direction to protect low pressure piping since the Waterleg Pump discharges to the suction piping of the RCIC Pump.

Valve 1E51-F062 has been added to the IST Program as a Category C valve.

For valve 1E51-F061, the closed test position has been deleted.

O.2
(Action Item)

Valve 1E51-F066

See response to Item J.6. Until the air operator is disconnected, this valve will be partially exercised during cold shutdowns using the air operator.

However, after the air operator is disconnected, valve 1E51-F066 cannot be exercised utilizing a mechanical exerciser during cold shutdowns since it is located inside the drywell which is inaccessible during cold shutdowns. Therefore, valve 1E51-F066 will be full-stroke exercised utilizing a mechanical exerciser during refueling outages after the air operator is disconnected.

Relief Request 2020 has been initiated to request relief from fully stroking this valve in the interim period until the air operator is disconnected and for the refueling outage test frequency after the air operator is disconnected.

Valve 1E51-F065

This RCIC injection line check valve prevents backflow from the Reactor Pressure Vessel. This valve is designed to be exposed to the Reactor Pressure Vessel pressure. During normal reactor operation the RCIC system is in standby mode. This valve is located within the pressure isolation boundary. Exercising this valve with flow would require one of the pressure isolation valves to be opened which could

	result in an inter-system Loss of Coolant Accident (LOCA). Exercising this valve with the mechanical exerciser during normal operation with a differential pressure equivalent to the Reactor Pressure Vessel across the disk would result in damage to the valve. Therefore, this valve cannot be exercised quarterly. This valve can be exercised during cold shutdowns and refueling outages. The IST program was revised to change the testing frequency from quarterly to cold shutdowns and Relief Request 062 was deleted.
O.3	Previous response is adequate. No IST Program changes.
O.4	Previous response is adequate. No IST Program changes.
O.5	Valve 1E51-F015 is a pressure control valve which is exempt from testing per IWV-1200(a) and has been deleted from the IST Program. Also, Relief Request 046 has been deleted.
O.6 (Action Item)	Valves 1E51-F004 and F005 have been reclassified as active valves. These valves have been added to the IST Program with required tests being exercise, stroke time, and loss of power at a frequency of quarterly. Valve 1E51-F047 performs only a passive safety function. Since this valve is not a Category A valve, no testing is required by the ASME Code and it has been deleted from the IST Program.
P.1	Previous response is adequate. These valves (1FC018A/B, 020 A/B, 022A/B, 073, 077 and 096) have been added to the IST program and will be exercised quarterly.
P.2	Previous response is adequate. No IST Program changes.
P.3	Previous response is adequate. These valves were already included in the IST Program. No IST Program changes.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
Q.1 (Action Item)	Valves 1G33-F051 and F052A/B perform a safety function in the closed position to prevent backflow from the Feedwater System and Residual Heat Removal (RHR) System to the Reactor Water Cleanup System and the other train of the RHR system. The IST program has been revised to exercise these valves during refueling outages. See Relief Request 2008 (previously 047) for justification.
R.1	These Instrument Air System and Containment Isolation Valves (1IA005, 006, 007 and 008) are within the normal flow path between the Instrument Air System and various valves located inside the drywell. Exercising these isolation valves during normal operation would isolate the air supply to various instrumentation and sensing lines and could cause the reactor to scram. Exercising these valves would also isolate the air supply to various safety-related valves and reduce the operational readiness of those systems. Partial stroke testing cannot be performed since these valves stroke fully on initiation. These valves will be exercised and stroke timed during cold shutdowns and refueling outages. The IST Program has been revised to change their testing frequency from quarterly to cold shutdown and Relief Request 063 has been deleted.
R.2	Previous response is adequate. The IST Program has been revised to change the testing frequency of these valves (1IA012A/B and 1IA013A/B) to quarterly from refueling. Relief Requests 028 and 029 have been deleted.
R.3	Valves 1IA042A/B perform a safety function in the closed position and are included in the response to Item B.4. The IST Program has been revised to change valves 1IA042A/B from Category C to A/C and to change their test frequency from refueling to cold shutdown. Relief Request 042 has been deleted. Valves 1IA076A/B do not perform a safety function.
R.4	Previous response is adequate. IST Program changes regarding valves 1IA012A/B, 013A/B and 042A/B were addressed in the responses to Items R.2 and R.3. Valves 1IA043A/B do

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
	not exist and reference to them in the IST Program has been deleted.
R.5	Previous response is adequate. These valves (1IA044A/B) have been deleted from the IST Program and Relief Request 044.
S.1	The IST Program was revised to change valves 1PS004, 005, 009, 010, 016, 017, 022, 023, 031, 032, 034, 035, 037, 038, 047, 048, 055, 056, 069 and 070 from Category B to A (containment isolation valves). The IST Program has been revised to identify the tests required as stroke time, loss of power, and exercise at a frequency of quarterly for all of the valves that were in Relief Request 043 and Relief Request 043 has been deleted. Relief Request 2013 (previously 058) has been initiated to eliminate the stroke time trending requirements for these rapid acting valves.
S.2	Previous response is adequate. No IST Program changes.
T.1	Relief Request 2005 (previously 027) seeks relief from the trending requirements for these rapid acting valves (0RA026, 027, 028 and 029). The IST Program was revised to change valves 0RA026 and 027 from Category B to A (containment isolation valves).
U.1	1RA017A/B are pressure regulating control valves and are exempt from testing per IWV-1200. These valves have been deleted from the IST Program. Relief Request 044 has been deleted since valves 1IA044A/B were deleted from the IST Program per Item R.5.
V.1	Previous response is adequate. Valves 1SM008 and 011 have been included in Relief Request 2006 (previously 037) and their testing frequency was changed from quarterly to refueling in the IST Program.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
W.1	Previous response is adequate. Valves 1SX025A/B/C are control valves which are exempt from testing per IWV-1200 and have been deleted from the IST Program. The IST Program has been revised to add the stroke time test for the other valves in Relief Request 048 and Relief Request 048 has been deleted.
W.2	Previous response is adequate. No IST Program changes.
W.3 (Action Item)	Valves 1SX012A/B, 1SX062A/B These Fuel Pool Cooling and Cleanup (FPCC) Heat Exchanger Backup Cooling Water Isolation Valves isolate the FPCC Heat Exchangers from the backup cooling water supplied from the lake. Testing of these valves will allow lake water into the FPCC heat exchangers. After the valves are stroked, the heat exchangers must be flushed and sampled to ensure the normal cooling water does not become contaminated by the lake water. Therefore, these valves cannot be tested during normal operation. These valves will be exercised and stroke timed during cold shutdowns and refueling outages. The IST Program has been revised to change the testing frequency of these valves from refueling to cold shutdown. Relief Request 030 has been deleted. Valves 1SX016A/B These valves cannot be tested quarterly or during cold shutdowns. Relief Request 2004 (previously 017) provides the detailed justification for testing these valves during refueling outages only.
W.4	Valves 1SX083 A/B provide flushing water to the RHR System Heat Exchangers which is not a safety function. These valves have been deleted from the IST Program.
W.5	Previous response is adequate. Valves 1SX025A/B/C are hydromoter control valves which are exempt from testing per IWV-1200 and have been deleted from the IST Program. Relief Request 064 has been deleted.

NRC ITEM	IST PROGRAM REFERENCE/RESPONSE
W.6	The IST Program has been revised to identify the required tests for 1SX071A/B, 072A/B, 073A/B, 074A/B, 075A/B, 076A/B, 105A/B, 106A/B and 107A/B as stroke timing and exercising during refueling outages. See Relief Request 2009 (previously 050) for the detailed justification.
W.7 (Action Item)	Valves 1SX013D/E/F perform no active safety function. Passive valves do not require testing per Subsection IWV so these valves have been deleted from the IST Program. Relief Request 049 has been deleted.
W.8	Previous response is adequate. Valves 2SX017A/B, 073A/B, 076A/B and 107A/B have been deleted from the IST Program and Relief Request 051 has been deleted.
X.1	Previous response is adequate. No IST Program changes.
X.2	The IST Program has been revised to include valves 0VC010A/B and 022A/B as Category B valves and identify the quarterly tests required.
X.3	The IST Program has been revised to include valves 0VC020A/B, and 032A/B as Category C valves and identify the quarterly tests required.
X.4	The IST Program has been revised to include valves 0VC001A/B and 002A/B and identify the quarterly tests required. These are solenoid operated valves (rapid acting) and are included in Relief Request 2013 (previously 058). Also, valves 0VC017A/B and 025A/B have been added to the IST Program since they perform a safety function.
X.5	Valves 0VC056A/B, 057A/B, 058A/B and 059A/B are normally closed solenoid operated drain valves and are interlocked with Shutdown Service Water System deluge valves (1SX107A/B and 1SX074A/B). These valves are not active valves as

defined in the ASME Section XI. The IST Program has been revised to delete these valves and Relief Request 055 has been deleted.

Y.1 Previous response is adequate. No IST Program changes.

Y.2 Previous response is adequate. No IST Program changes.

Y.3 Valves 1VR035, 036, 040 and 041 are containment isolation valves which are solenoid operated (rapid acting). The IST Program has been revised as follows:

1) The category of all of these valves has been changed from B to A (containment isolation valves).
2) The stroke time test has been identified as a required test for all of these valves every three months.
3) Relief Request 035 has been deleted.
4) Relief Request 2013 (previously 058) identifies the testing frequency and method for all of these valves.

Z.1 Previous response is adequate. No IST Program changes.

Z.2 Previous response is adequate. No IST Program changes.

Z.3 Valves 1WO001A/B, 002A/B (Relief Request 021)

These chilled water supply/return valves isolate the chilled water system from the steam tunnel area coolers, Reactor Water Cleanup System regenerative and non-regenerative heat exchanger air handling units, and the containment building air handling units. Testing these valves would isolate chilled water to certain air handling units that are important while the plant is operating. Isolating chilled water to these components could cause a high temperature initiated containment isolation and result in a reactor scram.

The IST Program has been revised to change these valves from Category B to A and to change the testing frequency from refueling to cold shutdown.

Relief Request 021 has been deleted.

Valves 1WO551A/B and 552A/B (Relief Request 052)

These Drywell Cooling Chilled Water Drywell Isolation Valves provide chilled water to the Drywell Cooling System Coil Cabinets. Exercising these valves during normal operation would require the Drywell Chilled Water System Coil Cabinets to be inoperable. These coil cabinets are required for drywell cooling during reactor operation.

The IST Program has been revised to change the testing frequency from refueling to cold shutdown.

2. Pump Testing Program

2.1 Previous response is adequate. Relief Request 3001 (previously 001) has been revised to provide a more detailed justification for not measuring pump bearing temperatures annually.

2.2 Relief Request 3004 (previously 004) provides the justification for not utilizing lake level to calculate pump inlet pressure.