Attachment I to JPN-95-053

PROPOSED TECHNICAL SPECIFICATION CHANGES
ASME SECTION XI SURVEILLANCE TESTING

(JPTS-93-003)

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
Docket No. 50-333
DPR-59

TECHNICAL SPECIFICATIONS

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3.0 Continued

D. Entry into an OPERATIONAL CONDITION (mode) or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION (mode) or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through OPERATIONAL CONDITIONS (modes) required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual specifications.

E. When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in COLD SHUTDOWN within the following 24 hours. This specification is not applicable when in Cold Shutdown or Refuel Mode.

F. Equipment removed from service or declared inoperable to comply with required actions may be returned to service under administrative control solely to perform testing required to demonstrate its operability or the operability of other equipment. This is an exception to LCO 3.0.B.

4.0 Continued

that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Surveillance requirements do not have to be performed on inoperable equipment.

D. Entry into an OPERATIONAL CONDITION (mode) shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to Operational Modes as required to comply with ACTION Requirements.

E. Surveillance Requirements for inservice testing shall be applicable as follows:

1. Inservice testing of pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f), except where specific written relief has been requested to the NRC pursuant to 10 CFR 50, Section 50.55a(f)(6)(i). The inservice testing and inspection program is based on an NRC approved edition of, and addenda to, Section XI of the ASME Boiler and Pressure Vessel Code which is in effect 12 months prior to the beginning of the inspection interval.

4.0 Continued

2. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice testing activities required by the Code and applicable Addenda shall be applicable as defined in Technical Specification 1.0.T.

3. The provisions of Specification 4.0.B are applicable to the frequencies specified in Technical Specification 1.0.T for performing inservice testing activities.

4. Performance of the above inservice testing activities shall be in addition to other specified Surveillance Requirements.

5. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

3.0 BASES

A. This specification states the applicability of each specification in terms of defined OPERATIONAL CONDITION (mode) and is provided to delineate specifically when each specification is applicable.

B. This specification defines those conditions necessary to constitute compliance with the terms of an individual Limiting Condition for Operation and associated ACTION requirement.

C. This specification delineates the ACTION to be taken for circumstances not directly provided for in the ACTION statements and whose occurrence would violate the intent of the specification. Under the terms of Specification 3.0, the facility is to be placed in COLD SHUTDOWN within the following 24 hours. It is assumed that the unit is brought to the required OPERATIONAL CONDITION (mode) within the required times by promptly initiating and carrying out the appropriate ACTION statement.

D. This specification provides that entry into an OPERABLE CONDITION (mode) must be made with (a) the full complement of required systems, equipment or components OPERABLE and (b) all other parameters as specified in the Limiting Conditions for Operation being met without regard for allowable deviations and out of service provisions contained in the ACTION statements.

The intent of this provision is to insure that facility operation is not initiated with either required equipment or systems inoperable or other limits being exceeded. Compliance with ACTION requirements that permit continued operation of the facility for an unlimited period of time provides an acceptable level of safety for continued operation without the regard to

D. Continued

the status of the plant before or after an OPERATIONAL CONDITION (mode) change. Therefore in this case, entry into an OPERATIONAL CONDITION (mode) or other specified condition may be made in accordance with the provisions of the ACTION requirements. The provisions of this specification should not, however, be interpreted as endorsing the failure to exercise good practice in restoring systems or components to OPERABLE status before startup.

Exceptions to this provision may be made for a limited number of specifications when startup with inoperable equipment would not affect plant safety. These exceptions are stated in the ACTION statements of the appropriate specifications.

E. This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the ACTION statements for power sources, when a normal or emergency power source is not OPERABLE. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the ACTION statements associated with individual systems, subsystems, trains, components or devices to be consistent with the ACTION statement of the associated electrical power source. It allows operation to be governed by the time

3.0 BASES - Continued

E. Continued

limits of the ACTION statement associated with the Limiting Condition for Operation for the normal or emergency power source, and not by the individual ACTION statements for each system, subsystem, train, component or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

For example, Specification 3.9.A. requires in part that both emergency diesel generator systems be OPERABLE. The ACTION statement provides for a 7 day out-of-service time when emergency diesel generator system A or B is not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 3.0.E., all systems, subsystems, trains, components and devices supplied by the inoperable emergency power source, diesel generator system A or B, would also be inoperable. This would dictate invoking the applicable ACTION statements for each of the applicable Limiting Conditions for Operation. However, the provisions of Specification 3.0.E. permit the time limits for continued operation to be consistent with the ACTION statement for the inoperable emergency diesel generator system instead, provided the other specified conditions are satisfied. If they are not satisfied, shutdown is required in accordance with this specification.

E. Continued

As a further example, Specification 3.9.A. requires in part that two 115KV lines and reserve station transformers be available. The ACTION statement provides a 7 day out-of-service time when both required offsite circuits are not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 3.0.E., all systems, subsystems, trains, components and devices supplied by the inoperable normal power sources, both of the offsite circuits, would also be inoperable. This would dictate invoking the applicable ACTION statements for each of the applicable LCOs. However, the provisions of Specification 3.0.E. permit the time limits for continued operation to be consistent with the ACTION statement for the inoperable normal power sources instead, provided the other specified conditions are satisfied. In this case, this would mean that for one division the emergency power source must be OPERABLE (as must be the components supplied by the emergency power source) and all redundant systems, subsystems, trains, components and devices in the other division must be OPERABLE, or likewise satisfy Specification 3.0.E. (i.e., be capable of performing their design functions and have an emergency power source OPERABLE). In other words, both emergency power sources A and B must be OPERABLE and all redundant systems, subsystems, trains, components and devices in both divisions must also be OPERABLE. If these conditions are not satisfied, shutdown is required in accordance with this specification.

In Cold Shutdown and Refuel Modes, Specification 3.0.E. is not applicable, and thus the individual ACTION statement for each applicable Limiting Condition for Operation in these OPERATIONAL CONDITIONS (modes) must be adhered to.

3.0 Bases - Continued

F. LCO 3.0.F establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with required actions. The sole purpose of this Specification is to provide an exception to LCO 3.0.B to allow testing to demonstrate: (a) the operability of the equipment being returned to service; or (b) the operability of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the required actions is limited to the time absolutely necessary to perform the allowed testing. This Specification does not provide time to perform any other preventive or corrective maintenance.

An example of demonstrating the operability of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with the required actions and must be reopened to perform the testing.

An example of demonstrating the operability of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of testing on another channel in the other trip system. A similar example of demonstrating the operability of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of testing on another channel in the same trip system.

4.0 BASES

A. This specification provides that surveillance activities necessary to insure the Limiting Conditions for Operation are met and will be performed during the OPERATIONAL CONDITIONS (modes) for which the Limiting Conditions for Operation are applicable. Provisions for additional surveillance activities to be performed without regard to the applicable OPERATIONAL CONDITIONS (modes) are provided in the individual Surveillance Requirements.

B. Specification 4.0.B establishes the limit for which the specified time interval for Surveillance Requirements may be extended. It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance (e.g., transient conditions or other ongoing surveillance or maintenance activities). It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are performed at each refueling outage and are specified with an 24 month surveillance interval. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillances that are not performed during refueling outages. The limitation of this specification is based on engineering judgement and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. The limit on extension of the normal surveillance interval ensures that the reliability confirmed by surveillance activities is not significantly reduced below that obtained from the specified surveillance interval.

C. This specification establishes the failure to perform a Surveillance Requirement within the allowed surveillance

C. Continued

interval, defined by the provisions of Specification 4.0.B, as a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when Surveillance Requirements have not been completed within the allowed surveillance interval and that the time limits of the ACTION requirements apply from the point in time it is identified that a surveillance has not been performed and not at the time that the allowed surveillance was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.C. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.B, was a violation of the OPERABILITY requirements of a Limiting Condition for Operation that is subject to enforcement action. Further, the failure to perform a surveillance within the provisions of Specification 4.0.B is a violation of a Technical Specification requirement and is, therefore, a reportable event under the requirements of 10 CFR 50.73(a)(2)(i)(B) because it is a condition prohibited by the plant Technical Specifications.

4.0 BASES - Continued

C. Continued

If the allowable outage time limits of the ACTION requirements are less than 24 hours or a shutdown is required to comply with ACTION requirements, a 24-hour allowance is provided to permit a delay in implementing the ACTION requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown is required to comply with ACTION requirements or before other remedial measures would be required that may preclude completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of OPERATIONAL CONDITION (mode) changes imposed by ACTION requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.C is allowed. If a surveillance is not completed within the 24-hour allowance, the time limits of the ACTION requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the ACTION requirements are applicable at the time the surveillance is terminated.

C. Continued

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.

D. This specification establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of this specification do not apply because this would delay placing the facility in a lower CONDITION of operation.

4.0 BASES - Continued

E. This specification ensures that inservice testing of pumps and valves will be performed in accordance with a periodically updated version of the FitzPatrick plant "Inservice Testing Program" to comply with Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. The plant program identifies classifications required by 10CFR50.55a and Regulatory Guide 1.26. Request for relief from any of these requirements is provided in writing to the NRC and is not a part of these Technical Specifications.

This specification includes a reference to Technical Specification Section 1.0.T which defines the frequencies for performing the inservice testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This reference is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. For example, the requirements of Specification 4.0.D to perform surveillance activities prior to entry into an OPERATIONAL CONDITION or other specified applicability condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps to be tested up to 96 hours after return to normal operation. As another example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

3.1 LIMITING CONDITIONS FOR OPERATION

3.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the instrumentation and associated devices which initiate the reactor scram.

Objective:

To assure the operability of the Reactor Protection System.

Specification:

A. The setpoints and minimum number of instrument channels per trip system that must be operable for each position of the reactor mode switch, shall be as shown in Table 3.1-1.

4.1 SURVEILLANCE REQUIREMENTS

4.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective:

To specify the type of frequency of surveillance to be applied to the protection instrumentation.

Specification:

A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1-1 and 4.1-2 respectively.

   The response time of the reactor protection system trip functions listed below shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals.

   1. Reactor High Pressure (02-3PT-55A, B, C, D)
   2. Drywell High Pressure (05PT-12A, B, C, D)
   3. Reactor Water Level-Low (L3) (02-3LT-101A, B, C, D)
   4. Main Steam Line Isolation Valve Closure
      (29PNS-80A2, B2, C2, D2)
      (29PNS-86A2, B2, C2, D2)
   5. Turbine Stop Valve Closure (94PNS-101, 102, 103, 104)
   6. Turbine Control Valve Fast Closure (94PS-200A, B, C, D)
   7. APRM Fixed High Neutron Flux
   8. APRM Flow Referenced Neutron Flux

3.3.C (cont'd)

2. The average of the scram insertion times for the three fastest operable control rods of all groups of four control rods in a two-by-two array shall be no greater than:

Control Rod Notch Position Observed	Average Scram Insertion Time (Seconds)
46	0.361
38	0.977
24	2.112
04	3.764

3. The maximum scram insertion time for 90 percent insertion of any operable control rod shall not exceed 7.00 sec.

4.3.C (cont'd)

2. At 16-week intervals, 10 percent of the operable control rod drives shall be scram timed above 950 psig. Whenever such scram time measurements are made, an evaluation shall be made to provide reasonable assurance that proper control rod drive performance is being maintained.

3. All control rods shall be determined operable by demonstrating the scram discharge volume drain and vent valves are:

	Item	Frequency
a.	Verified Open	Once per 31 Days
b.	Cycled Fully Closed and Open	In accordance with the Inservice Testing Program
c.	Verified to close within 30 seconds after receipt of an actual or simulated scram signal and open when the actual or simulated scram signal is reset.	Once per 18 Months

3.4 LIMITING CONDITIONS FOR OPERATION

3.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the operating status of the Standby Liquid Control System.

Objective:

To assure the availability of a system with the capability to shut down the reactor and maintain the shutdown condition without control rods.

Specification:

A. Normal Operation

During periods when fuel is in the reactor and prior to startup from a cold condition, the Standby Liquid Control System shall be operable except as specified in 3.4.B below. This system need not be operable when the reactor is in the cold condition, all rods are fully inserted and Specification 3.3.A is met.

4.4 SURVEILLANCE REQUIREMENTS

4.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the periodic testing requirements for the Standby Liquid Control System.

Objective

To verify the operability of the Standby Liquid Control System.

Specification:

A. Normal Operation

The operability of the Standby Liquid Control System shall be verified by performance of the following tests:

	Item	Frequency
1.	Verify each valve (manual, power operated, or automatic) in the system flow path that is not locked, sealed or otherwise secured in position, is in the correct position.	Once per 31 Days
2.	Pump minimum flow rate of 50 gpm shall be verified against a system head of $\geq$ 1,275 psig using demineralized water from the test tank.	In accordance with the Inservice Testing Program

4.4 (cont'd)

	Item	Frequency
3.	Manually initiate the system, except the explosive valves and pump solution in the recirculation path	Once per 18 Months
4.	Explode one of three primer assemblies manufactured in same batch to verify proper function. Then install the two remaining primer assemblies of the same batch in the explosive valves.	Once per 18 Months
5.	Demineralized water shall be injected into the reactor vessel to test that valves (except explosive valves) not checked by the recirculation test are not clogged.	Once per 18 Months
6.	Test that the setting of the system pressure relief valves is between 1,400 and 1,490 psig.	In accordance with the Inservice Testing Program
7.	Disassemble and inspect one explosive valve so that it can be established that the valve is not clogged. Both valves shall be inspected in the course of two test intervals.	In accordance with the Inservice Testing Program

B Operation with Inoperable Components

From and after the date that a redundant component is made or found to be inoperable, Specification 3.4.A shall be considered fulfilled, and continued operation permitted, provided that:

1. The component is returned to an operable condition within 7 days.

B. Operation with Inoperable Components

When a component becomes inoperable its redundant component shall be verified to be operable immediately and daily thereafter.

ATWS requirements are satisfied at all concentrations above 10 weight percent for a minimum enrichment of 34.7 atom percent of B-10.

Figure 3.4-1 shows the permissible region of operation on a sodium pentaborate solution volume versus concentration graph. This curve was developed for 34.7% enriched B-10 and a pumping rate of 50 gpm. Each point on this curve provides a minimum of 660 ppm of equivalent natural boron in the reactor vessel upon injection of SLC solution. At a solution volume of 2200 gallons, a weight concentration of 13% sodium pentaborate, enriched to 34.7% boron-10 is needed to meet shutdown requirements. The maximum storage volume of the solution is 4780 gallons which is the net overflow volume in the SLC tank.

Boron concentration, isotopic enrichment of boron-10, solution temperature, and volume are checked on a frequency adequate to assure a high reliability of operation of the system should it ever be required. Experience with pump operability indicates that periodic testing in accordance with the IST Program is adequate to detect if degradation has occurred. Valves in the system flowpath are verified to be in the proper position on a monthly basis. This requirement does not apply to explosive valves or to valves that cannot be inadvertently misaligned, such as check valves. Verifying the correct alignment of manual, power operated, or automatic valves in the system flow path provides assurance that the proper flowpath will exist for system operation. The month frequency is based on engineering judgement and is supported by procedural controls governing valve operation that ensure correct valve positions.

The only practical time to test the Standby Liquid Control System is during a refueling outage and by initiation from local stations. Components of the system are checked periodically as described above and make a functional test of the entire system on a frequency of more than once each refueling outage unnecessary. A test of explosive charges from one manufacturing batch is made to assure that the charges are satisfactory. A continuous check of the firing circuit continuity is provided by pilot lights in the control room.

The relief valves in the Standby Liquid Control System protect the system piping and positive displacement pumps, which are nominally designed for 1,500 psig, from overpressure. The pressure relief valves discharge back to the standby liquid control pump suction line.

B. Operation with Inoperable Components

Only one of two standby liquid control pumping circuits is needed for operation. If one circuit is inoperable, there is no immediate threat to shutdown capability, and reactor operation may continue during repairs. Assurance that the remaining system will perform its function is obtained by verifying pump operability in the operable circuit at least daily.

C. Sodium Pentaborate Solution

To guard against precipitation, the solution, including that in the pump suction piping, is kept at least 10°F above saturation temperature. Figure 3.4-2 shows the saturation temperature including 10°F margin as a function of sodium pentaborate solution concentration. Tank heater and heat tracing system are provided to assure compliance with this requirement. The set points for the automatic actuation of the tank heater and heat tracing system are established based on the solution concentration. Temperature and liquid level alarms for the system annunciate in the control room. Pump operability is checked on a frequency to assure a high reliability of operation of the system should it ever be required.

3.5 (cont'd)

4.5 (cont'd)

b.	Flow Rate Test - Core spray pumps shall deliver at least 4,265 gpm against a system head corresponding to a reactor vessel pressure greater than or equal to 113 psi above primary containment pressure.	In accordance with the Inservice Testing Program
c.	Verify that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed or otherwise secured in position, is in the correct position.	Once per 31 Days
d.	Motor operated valves.	In accordance with the Inservice Testing Program
e.	Core Spray Header Δp Instrumentation Check Calibrate Test	 Once/day Once/3 months Once/3 months
f.	Logic System Functional Test	Once/operating cycle
g.	Testable Check Valves	In accordance with the Inservice Testing Program

3.5 (cont'd)

5. All recirculation pump discharge valves shall be operable prior to reactor startup (or closed if permitted elsewhere in these specifications).

6. if the requirements of 3.5.A cannot be met, the reactor shall be placed in the cold condition within 24 hrs.

B. Containment Cooling Mode (of the RHR System)

1. Both subsystems of the containment cooling mode, each including two RHR and two RHRSW pumps, shall be operable whenever there is irradiated fuel in the reactor vessel, prior to startup from a cold condition, and reactor coolant temperature ≥212°F except as specified below.

4.5 (cont'd)

5. All recirculation pump discharge valves shall be tested for operability any time the reactor is in the cold condition exceeding 48 hours, if operability tests have not been performed during the preceding 31 days.

B. Containment Cooling Mode (of the RHR System)

1. Subsystems of the containment cooling mode shall be demonstrated operable by performing:

	Item	Frequency
a.	a pump operability and flow rate test on the RHR pumps.	Per Surveillance Requirement 4.5.A.3
b.	an operability test of the RHR containment cooling mode motor operated valves.	In accordance with the Inservice Testing Program
c.	an operability test on the RHRSW pumps and associated motor operated valves.	In accordance with the Inservice Testing Program
d.	a flow rate test verifying a flow rate of 4000 gpm for each RHRSW pump and a total flow rate of 8000 gpm for two RHRSW pumps operating in parallel.	In accordance with the Inservice Testing Program

3.5 (cont'd)

2. Should one RHRSW pump of the components required in 3.5.B.1 above be made or found inoperable, continued reactor operation is permissible only during the succeeding 30 days provided that during such 30 days all remaining components of the containment cooling mode subsystems are operable.

3. Should one of the containment cooling subsystems become inoperable or should one RHRSW pump in each subsystem become inoperable, continued reactor operation is permissible for a period not to exceed 7 days.

4. If the requirements of 3.5.B.2 or 3.5.B.3 cannot be met, the reactor shall be placed in a cold condition within 24 hr.

5. Low power physics testing and reactor operator training shall be permitted with reactor coolant temperature $< 212°F$ with an inoperable component(s) as specified in 3.5.B above.

4.5 (cont'd)

	Item	Frequency
e.	a verification that each valve (manual, power operated, or automatic) in the flowpath that is not locked, sealed or otherwise secured in position, is in the correct position.	Once per 31 Days
f.	an air test shall be performed on the containment spray headers and nozzles.	Once per 5 Years

2. When it is determined that one RHRSW pump of the components required in 3.5.B.1 above is inoperable, the remaining components of the containment cooling mode subsystems shall be verified to be operable immediately and daily thereafter.

3. When one containment cooling subsystem becomes inoperable, the redundant containment cooling subsystem shall be verified to be operable immediately and daily thereafter. When one RHRSW pump in each subsystem becomes inoperable, the remaining components of the containment cooling subsystems shall be verified to be operable immediately and daily thereafter.

3.5 (Cont'd)

E. Reactor Core Isolation Cooling (RCIC) System

1. The RCIC System shall be operable whenever there is irradiated fuel in the reactor vessel and the reactor pressure is greater than 150 psig and reactor coolant temperature is greater than 212°F except from the time that the RCIC System is made or found to be inoperable for any reason, continued reactor power operation is permissible during the succeeding 7 days unless the system is made operable earlier provided that during these 7 days the HPCI System is operable.

2. If the requirements of 3.5.E cannot be met, the reactor shall be placed in the cold condition and pressure less than 150 psig within 24 hours.

3. Low power physics testing and reactor operator training shall be permitted with inoperable components as specified in 3.5.E.2 above, provided that reactor coolant temperature is ≤212°F.

4. The RCIC system is not required to be operable during hydrostatic pressure and leakage testing with reactor coolant temperatures between 212°F and 300°F and irradiated fuel in the reactor vessel provided all control rods are inserted.

4.5 (Cont'd)

E. Reactor Core Isolation Cooling (RCIC) System

1. RCIC System testing shall be performed as follows provided a reactor steam supply is available. If steam is not available at the time the surveillance test is scheduled to be performed, the test shall be performed within ten days of continuous operation from the time steam becomes available.

Item	Frequency
a. Simulated Automatic Actuation (and Restart*) Test	Once/operating cycle
b. Verify that each valve (manual, power operated or automatic) in the system flowpath that is not locked, sealed or otherwise secured in position, is in the correct position.	Once per 31 Days
c. Motor Operated Valve Operability	Once per 92 Days

* Automatic restart on a low water level signal which is subsequent to a high water level trip.

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3.5 (cont'd)

4.5 (cont'd)

Item	Frequency
d. Flow Rate Test - The RCIC pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of 1120 psig to 150 psig.	Once per 92 Days
e. Testable Check Valves	Tested for operability any time the reactor is in the cold condition exceeding 48 hours, if operability tests have not been performed during the preceding 92 days.
f. Logic System Functional Test	Once/operating cycle

2. When it is determined that the RCIC System is inoperable at a time when it is required to be operable, the HPCI System shall be verified to be operable immediately and daily thereafter.

3.5 (cont'd)

F. ECCS-Cold Condition

1. A minimum of two low pressure Emergency Core Cooling subsystems shall be operable whenever irradiated fuel is in the reactor, the reactor is in the cold condition, and work is being performed with the potential for draining the reactor vessel.

2. A minimum of one low pressure Emergency Core Cooling subsystem shall be operable whenever irradiated fuel is in the reactor, the reactor is in the cold condition, and no work is being performed with the potential for draining the reactor vessel.

3. Emergency Core Cooling subsystems are not required to be operable provided that the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed, and the water level above the fuel is in accordance with Specification 3.10.C.

4. With the requirements of 3.5.F.1, 3.5.F.2, or 3.5.F.3 not satisfied, suspend core alterations and all operations with the potential for draining the reactor vessel. Restore at least one system to operable status within 4 hours or establish Secondary Containment Integrity within the next 8 hours.

4.5 (cont'd)

F. ECCS-Cold Condition

Surveillance of the low pressure ECCS systems required by 3.5.F.1 and 3.5.F.2 shall be as follows:

1. In accordance with the Inservice Testing Program, perform a flowrate test on the required Core Spray pump(s) and/or the RHR pump(s). Each Core Spray pump shall deliver at least 4,265 gpm against a system head corresponding to a reactor vessel pressure greater than or equal to 113 psi above primary containment pressure. Each RHR pump shall deliver at least 8910 gpm against a system head corresponding to a reactor vessel to primary containment differential pressure of $\geq$ 20 psid.

2. In accordance with the Inservice Testing Program, perform an operability test on the required Core Spray and/or LPCI motor operated valves.

3. Once each shift verify the suppression pool water level is greater than or equal to 10.33 ft. whenever the low pressure ECCS subsystems are aligned to the suppression pool.

4. Once each shift verify a minimum of 324 inches of water is available in the Condensate Storage Tanks (CST) whenever the Core Spray System(s) is aligned to the tanks.

5. Once per 31 days, verify that each valve (manual, power operated, or automatic) in the flowpath that is not locked, sealed, or otherwise secured in position, is in the correct position for the required RHR and/or core spray system(s).

3.5 (cont'd)

G. Maintenance of Filled Discharge Pipe

Whenever core spray subsystems, LPCI subsystems, HPCI, or RCIC are required to be operable, the discharge piping from the pump discharge valve to the injection valve shall be filled.

1. From and after the time that the pump discharge piping of the HPCI, RCIC, LPCI, or Core Spray Systems cannot be maintained in a filled condition, that pump shall be considered inoperable for purposes of satisfying Specifications 3.5.A, 3.5.C, and 3.5.E.

4.5 (cont'd)

G. Maintenance of Filled Discharge Pipe

The following surveillance requirements shall be adhered to, in order to assure that the discharge piping of the core spray subsystem, LPCI subsystem, HPCI, and RCIC are filled:

1. The discharge piping of these subsystems and systems shall be verified filled with water from the pump discharge valve to the injection valve once per 31 days.

2. Following any period where these subsystems or systems have not been maintained in a filled condition; the discharge piping shall be verified filled with water from the pump discharge valve to the injection valve prior to declaring the subsystem or system operable.

3. The level switches located on the Core Spray and RHR System discharge piping high points which monitor these lines to ensure they are full shall be functionally tested once per 31 days.

3.5 (cont'd)

H. Average Planar Linear Heat Generation Rate (APLHGR)

During power operation, the APLHGR for each type of fuel as a function of axial location and average planar exposure shall be within limits based on applicable APLHGR limit values which have been approved for the respective fuel and lattice types. These values are specified in the Core Operating Limits Report. If at anytime during reactor power operation greater than 25% of rated power it is determined that the limiting value for APLHGR is being exceeded, action shall then be initiated within 15 minutes to restore operation to within the prescribed limits. If the APLHGR is not returned to within the prescribed limits within two (2) hours, the reactor power shall be reduced to less than 25% of rated power within the next four hours, or until the APLHGR is returned to within the prescribed limits.

4.5 (cont'd)

H. Average Planar Linear Heat Generation Rate (APLHGR)

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at ≥25% rated thermal power.

4.5 BASES

The testing interval for the Core and Containment Cooling Systems is based on a quantitative reliability analysis, industry practice, judgement, and practicality. The Emergency Core Cooling Systems have not been designed to be fully testable during operation. For example, the core spray final admission valves do not open until reactor pressure has fallen to 450 psig; thus, during operation even if high drywell pressure were simulated, the final valves would not open. In the case of the HPCI, automatic initiation during power operation would result in pumping cold water into the reactor vessel which is not desirable.

The systems will be automatically actuated during a refueling outage. In the case of the Core Spray System, condensate storage tank water will be pumped to the vessel to verify the operability of the core spray header. On a monthly basis, correct alignment shall be verified for manual, power operated, or automatic valves in ECCS and RCIC system flow paths to provide assurance that proper flow paths will exist for system operation. For the HPCI and RCIC Systems, this requirement also includes the steam flowpath for the turbines and the flow controller position. This surveillance requirement does not apply to valves that cannot be inadvertently misaligned such as check valves, or to valves that are locked, sealed, or otherwise secured in position. A valve that receives an initiation signal is allowed to be in a non-accident position provided the valve will automatically reposition in the proper stroke time upon receipt of the initiation signal. The monthly frequency of this requirement is based upon engineering judgement and is supported by procedural controls governing valve operation that ensure correct valve positions. This frequency is further supported by the Inservice Testing Program, which demonstrates system pump and power operated valve operability. This combination of automatic actuation tests, periodic pump and valve testing, and monthly flow path verification is adequate to demonstrate operability of these systems.

With components or subsystems out-of- overall core and containment cooling reliability is by verifying the operability of the remaining cooling . Consistent with the definition of operable in Sectio , demonstrate means conduct a test to show; verify ns that the associated surveillance activities have been satisfactorily performed within the specified time interval.

The RCIC flow rate is described in the UFSAR. The flow rates to be delivered to the reactor core for HPCI, the LPCI mode of RHR, and CS are based on the SAFER/GESTR LOCA analysis. The flow rates for the LPCI mode of RHR and CS are modified by a 10 percent reduction from the SAFER/GESTR LOCA analysis. The reductions are based on a sensitivity analysis (General Electric MDE-93-0786) performed for the parameters used in the SAFER/GESTR analysis.

The CS surveillance requirement includes an allowance for system leakage in addition to the flow rate required to be delivered to the reactor core. The leak rate from the core spray piping inside the reactor but outside the core shroud is assumed in the UFSAR and includes a known loss of less than 20 gpm from the 1/4 inch diameter vent hole in the core spray T-box connection in each of the loops, and in the B loop, a potential additional loss of less than 40 gpm from a clamshell repair whose structural weld covers only 5/6 of the circumference of the pipe. Both of these identified sources of leakage occur in the space between the reactor vessel wall and the core shroud. Therefore flow lost through these leak sources does not contribute to core cooling.

4.5 BASES (cont'd)

The surveillance requirements to ensure that the discharge piping of the core spray, LPCI mode of the RHR, HPCI, and RCIC Systems are filled provides for a visual observation that water flows from a high point vent. This ensures that the line is in a full condition. Instrumentation has been provided in the Core Spray System and LPCI System to monitor the presence of water in the discharge piping. This instrumentation is functionally tested monthly to ensure that during the interval between the monthly checks the status of the discharge piping is monitored on a continuous basis.

Normally the low pressure ECCS subsystems required by Specification 3.5.F.1 are demonstrated operable by the surveillance tests in Specifications 4.5.A.1 and 4.5.A.3. Section 4.5.F specifies periodic surveillance tests for the low pressure ECCS subsystems which are applicable when the reactor is in the cold condition. These tests in conjunction with the requirements on filled discharge piping (Specification 3.5.G), and the requirements on ECCS actuation instrumentation (Specification 3.2.B), assure adequate ECCS capability in the cold condition. The water level in the suppression pool, or the Condensate Storage Tanks (CST) when the suppression pool is inoperable, is checked once each shift to ensure that sufficient water is available for core cooling.

3.7 (cont'd)

4. Pressure Suppression Chamber Reactor Building Vacuum Breakers

   a. Except as specified in 3.7.A.4.b below, two Pressure Suppression Chamber Reactor Building Vacuum Breakers shall be operable at all times when the primary containment integrity is required. The setpoint of the differential pressure instrumentation which actuates the pressure suppression chamber reactor building vacuum breakers shall be ≤0.5 psi below reactor building pressure.

   b. From and after the date that one of the pressure suppression chamber reactor building vacuum breakers is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding 7 days, unless such vacuum

4.7 (cont'd)

4. Pressure Suppression Chamber-Reactor Building Vacuum Breakers

   a. The pressure suppression chamber reactor building vacuum breakers shall be checked for proper operation in accordance with the Inservice Testing Program.

   b. Instrumentation associated with pressure suppression chamber-reactor building vacuum breakers shall be functionally tested once per 92 days.

3.7 (cont'd)

breaker is sooner made operable, provided that the repair procedure does not violate primary containment integrity.

5. Pressure Suppression Chamber - Drywell Vacuum Breakers

a. When primary containment integrity is required, all drywell suppression chamber vacuum breakers shall be operable and positioned in the fully closed position except during testing and as specified in 3.7.A.5.b below.

b. One drywell suppression chamber vacuum breaker may be non-fully closed so long as it is determined to be not more than 1° open as indicated by the position lights.

c. One drywell suppression chamber vacuum breaker may be determined to be inoperable for opening.

d. Deleted

4.7 (cont'd)

5. Pressure Suppression Chamber - Drywell Vacuum Breakers

a. Each drywell suppression chamber vacuum breaker shall be exercised through an opening - closing cycle in accordance with the Inservice Testing Program.

b. When it is determined that one vacuum breaker is inoperable for fully closing when operability is required, the operable breakers shall be exercised immediately, and every 15 days thereafter until the inoperable valve has been returned to normal service.

c. Each vacuum breaker valve shall be visually inspected to insure proper maintenance and operation in accordance with the Inservice Testing Program.

d. A leak test of the drywell to suppression chamber structure shall be conducted once per operating cycle; the acceptable leak rate is ≤ 0.25 in. water/min, over a 10 min period, with the drywell at 1 psid.

3.7 (cont'd)

D. Primary Containment Isolation Valves

1. Whenever primary containment integrity is required per 3.7.A.2, containment isolation valves and all instrument line excess flow check valves shall be operable, except as specified in 3.7.D.2. The containment vent and purge valves shall be limited to opening angles less than or equal to that specified below:

Valve Number	Maximum Opening Angle
27AOV-111	40°
27AOV-112	40°
27AOV-113	40°
27AOV-114	50°
27AOV-115	50°
27AOV-116	50°
27AOV-117	50°
27AOV-118	50°

4.7 (cont'd)

c. Secondary containment capability to maintain a 1/4 in. of water vacuum under calm wind conditions with a filter train flow rate of not more than 6,000 cfm, shall be demonstrated at each refueling outage prior to refueling.

D. Primary Containment Isolation Valves

1. The primary containment isolation valves surveillance shall be performed as follows:

	Item	Frequency
a.	The operable isolation valves that are power operated and automatically initiated shall be tested for simulated automatic initiation and for closure time.	In accordance with the Inservice Testing Program
b.	Instrument line excess flow check valves shall be tested for proper operation.*	In accordance with the Inservice Testing Program
c.	All normally open power-operated isolation valves (except for the main steam isolation valves) shall be fully closed and reopened.	In accordance with the Inservice Testing Program

* The current surveillance interval for testing instrument line excess flow check valves is extended until the end of the R11/C12 refueling outage scheduled for January, 1995. This is a one-time extension, effective only for this surveillance interval. The next surveillance interval will begin upon completion of this surveillance.

3.7 (cont'd)

2. With one or more of the containment isolation valves inoperable, maintain at least one isolation valve operable in each affected penetration that is open and:

   a. Restore the inoperable valve(s) to operable status within 4 hours; or

   b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the closed position. Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control; or

   c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or a blind flange.

3. If Specifications 3.7.D.1 or 3.7.D.2 cannot be met the reactor shall be in the cold condition within 24 hrs.

4.7 (cont'd)

Item		Frequency
d.	With the reactor at a reduced power level, fast close each main steam isolation valve, one at a time, and verify closure time.	In accordance with the Inservice Testing Program
e.	Main steam isolation valves shall be exercised by partial closure and subsequent reopening.	Twice per Week

2. Whenever a containment isolation valve is inoperable, verify the affected penetration flowpath is isolated once per 31 days.

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4.7 BASES (cont'd)

operability results in a more reliable system.

The main steam line isolation valves are functionally tested on a more frequent interval to establish a high degree of reliability.

The primary containment is penetrated by several small diameter instrument lines connected to the reactor coolant system. Each instrument line contains a 0.25 in. restricting orifice inside the primary containment and an excess flow check valve outside the primary containment.

A list of containment isolation valves, including a brief description of each valve is included in Section 7.3 of the updated FSAR.

Primary containment penetrations which have an inoperable isolation valve (or valves) are verified to have the penetration flow path isolated monthly. When the closed isolation device is in a high radiation area, this verification may be performed by administrative means.

3.11 (cont'd)

D. Emergency Service Water System

1. To ensure adequate equipment and area cooling, both ESW systems shall be operable when the requirements of specification 3.5.A and 3.5.B must be satisfied, except as specified below in specification 3.11.D.2.

4.11 (Cont'd)

D. Emergency Service Water System

1. Surveillance of the ESW system shall be performed as follows:

	Item	Frequency
a.	Simulated Automatic Actuation Test	Once/operating cycle
b.	Flow Rate Test - Each ESW pump shall deliver at least 1500 gpm to its respective loop. The loop. The pump total developed head shall be greater than or equal to the corresponding point on the pump curve, reduced by a maximum of 7%, for the measured flow.	In Accordance with the Inservice Testing Program
c.	Verify that each valve (manual, power operated, or automatic) in the system flowpath that is not locked, sealed or otherwise secured in position, is in the correct position.	Once per 31 Days
d.	Motor Operated Valves	In Accordance with the Inservice Testing Program

Attachment II to JPN-95-053

SAFETY EVALUATION FOR PROPOSED TECHNICAL SPECIFICATION CHANGES ASME SECTION XI SURVEILLANCE TESTING

(JPTS-93-003)

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
Docket No. 50-333
DPR-59

SAFETY EVALUATION FOR PROPOSED TECHNICAL SPECIFICATION CHANGES ASME SECTION XI SURVEILLANCE TESTING (JPTS-90-003)

I. DESCRIPTION OF THE PROPOSED CHANGES

The proposed change to the James A. FitzPatrick Technical Specifications (TS) incorporates the inservice testing requirements of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code and makes editorial corrections on the affected pages. The proposed change is described below.

Minor changes in format, such as type font, margins or hyphenation, are not described in this submittal. These changes are typographical in nature and do not affect the content of the Technical Specification.

Incorporation of ASME Section XI

1. Revise page i to show Specification 3.1, Reactor Protection System, located on page 30i to reflect the renumbering of pages in item 2.

2. Renumber existing pages 30b, 30c, 30d, 30e, 30f and 30g to read 30c, 30d, 30e, 30f, 30g and 30i, respectively. The changes described in the following items 5 and 6 refer to these renumbered pages and indicate where new pages are inserted.

3. Add a new Surveillance Requirement 4.0.E to revised page 30a and new page 30b which reads as follows:

   "E. Surveillance Requirements for inservice testing of components shall be applicable as follows:

      1. Inservice testing of pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f), except where specific written relief has been requested to the NRC pursuant to 10 CFR 50, Section 50.55a(f)(6)(i). The inservice testing and inspection program is based on an NRC approved edition of, and addenda to, Section XI of the ASME Boiler and Pressure Vessel Code which is in effect 12 months prior to the beginning of the inspection interval.

      2. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice testing activities required by the Code and applicable Addenda shall be applicable as defined in Technical Specification 1.0.T.

3. The provisions of Specification 4.0.B are applicable to the frequencies specified in Technical Specification 1.0.T for performing inservice testing activities.

4. Performance of the above inservice testing activities shall be in addition to other specified Surveillance Requirements.

5. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification."

4. Add a new Bases Section 4.0.E to the newly created page "30h" which reads as follows:

"E. This specification ensures that inservice testing of pumps and valves will be performed in accordance with a periodically updated version of the FitzPatrick plant "Inservice Testing Program" and the "Weld and Support Inservice Inspection Program" to comply with Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. The plant programs identify classifications required by 10CFR50.55a and Regulatory Guide 1.26. Request for relief from any of these requirements is provided in writing to the NRC and is not a part of these Technical Specifications.

This specification includes a reference to Technical Specification Section 1.0.T which defines the frequencies for performing the inservice testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This reference is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. For example, the requirements of Specification 4.0.D to perform surveillance activities prior to entry into an OPERATIONAL CONDITION or other specified applicability condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps to be tested up to 96 hours after return to normal operation. As another example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable."

5. On page 96, Surveillance Requirement 4.3.C.3:

   a) Revise and reformat Surveillance Requirement 4.3.C.3 from:

   "All control rods shall be determined operable once each operating cycle by demonstrating the scram discharge volume drain and vent valves operable when the scram test initiated by placing the mode switch in the SHUTDOWN position is performed as required by Table 4.1-1 and by verifying that the drain and vent valves:

   a. Close in less than 30 seconds after receipt of a signal for control rods to scram, and

   b. Open when the scram signal is reset."

   to

   "All control rods shall be determined operable by demonstrating the scram discharge volume drain and vent valves are:

Item	Frequency
a. Verified Open	Once per 31 Days
b. Cycled Fully Closed and Open	In accordance with the Inservice Testing Program
c. Verified to close within 30 seconds after receipt of an actual or simulated scram signal and open when the actual or simulated scram signal is reset."	Once per 18 Months

6. On page 105 and 106, Surveillance Requirement 4.4.A;

   a) Add a new Surveillance Requirement 4.4.A.1 which states the following:

"Item	Frequency
Verify that each valve (manual, power operated, or automatic) in the system flow path that is not locked, sealed, or otherwise secured in position, is in the correct position."	Once per 31 Days

b) Change Surveillance Requirement 4.4.A.1 to 4.4.A.2, change format to Item and Frequency as in 6.a above, and change frequency from: "At Least Once per Month" to: "In accordance with the Inservice Testing Program".

c) Change Surveillance Requirement 4.4.A.2 to 4.4.A.3, 4.4.A.4, 4.4.A.5, 4.4.A.6, and 4.4.A.7 and reformat to Item and Frequency as in 6.a above.

d) Change the frequency of Surveillance Requirements 4.4.A.3, 4.4.A.4, and 4.4.A.5 from "At least once during each operating cycle" to "Once per 18 months".

e) Change frequency of Surveillance Requirements 4.4.A.6 and 4.4.A.7 from "At least once during each operating cycle" to "In accordance with the Inservice Testing Program".

f) In Surveillance Requirement 4.4.A.7, delete the sentence reading "Both valves shall be inspected in the course of two operating cycles."

7. On page 109, Bases Section 3.4.A, replace the sentence:

> "Experience with pump operability indicates that monthly testing is adequate to detect if failures have occurred."

with

> "Experience with pump operability indicates that periodic testing in accordance with the IST program is adequate to detect if degradation has occurred. Valves in the system flowpath are verified to be in the proper position on a monthly basis. This requirement does not apply to explosive valves or to valves that cannot be inadvertently misaligned such as check valves. Verifying the correct alignment for manual, power operated, or automatic valves in the system flow path provides assurance that proper flow paths will exist for system operation. The monthly frequency is based on engineering judgement and is supported by procedural controls governing valve operation that ensure correct valve positions."

8. On page 113, Surveillance Requirement 4.5.A.1;

a) Replace "Once/3 Months" with "In accordance with the Inservice Testing Program" in Surveillance Requirement 4.5.A.1.b.

b) Delete Surveillance Requirement 4.5.A.1.c and replace with the following:

"Verify that each valve (manual, power operated, or automatic) in the system flow path that is not locked, sealed, or otherwise secured in position, is in the correct position.	Once Per 31 Days

c) Change the frequency of Surveillance Requirement 4.5.A.1.d from "once/month" to "In accordance with the Inservice Testing Program".

d) Replace "31 days" with "In Accordance with the Inservice Testing Program" in Surveillance Requirement 4.5.A.1.g.

9. On pages 115a and 116, Surveillance Requirements 4.5.B.1;

a) Change the format of Surveillance Requirement 4.5.B.1 to Item and Frequency as in 6.a above.

b) Move the phrase "per Surveillance Requirement 4.5.A.3" from the Item description to the Frequency for Surveillance Requirement 4.5.B.1.a.

c) In 4.5.B.1.b replace "a monthly" with "an" and add "In accordance with the Inservice Testing Program" under Frequency.

d) Change 4.5.B.1.c.1" to "4.5.B.1.c", replace "a monthly" with "an" and add "In accordance with the Inservice Testing Program" under Frequency.

e) Change "4.5.B.1.c.2" to "4.5.B.1.d", delete the phase "at least once every 3 months and" from the Item description and add "In accordance with the Inservice Testing Program" under Frequency.

f) Add new Surveillance Requirement 4.5.B.1.e as follows:

"A verification that each valve (manual, power operated, or automatic) in the flowpath that is not locked, sealed, or otherwise secured in position, is in the correct position."	Once per 31 Days

g) Change "4.5.B.1.d" to "4.5.B.1.f", delete the phrase "during each five year period" in the Item description and add "once per 5 years" under Frequency.

10. On pages 121 and 121a, Surveillance Requirement 4.5.E.1;

a) Replace Surveillance Requirement 4.5.E.1.b with the following:

"Verify that each valve (manual, power operated, or automatic)in the system flow path that is not locked, sealed, or otherwise secured in position, is in the correct position."	Once per 31 Days

b) Change the frequency of Surveillance Requirement 4.5.E.1.c from "once/month" to "Once per 92 days".

c) For Surveillance Requirement 4.5.E.1.d, replace:

"Flow Rate	Once/3 months"

with

"Flow Rate Test - The RCIC pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of 1120 psig to 150 psig."	Once per 92 Days

d) Replace "31 days" with "92 Days" in Surveillance Requirement 4.5.E.1.e.

11. On page 122, Surveillance Requirement 4.5.F;

a) Revise the first sentence of Surveillance Requirement 4.5.F.1 to read:

"In accordance with the Inservice Testing Program perform a flowrate test on the required core spray pump(s) and/or the RHR pump(s)."

b) Revise Surveillance Requirement 4.5.F.2 to read:

"In accordance with the Inservice Testing Program perform an operability test on the required core spray and/or LPCI motor operated valves."

c) Add a new Surveillance Requirement, 4.5.F.5, which reads as follows:

"Once per 31 days, verify that each valve (manual, power operated, or automatic) in the system flow path that is not locked, sealed, or otherwise secured in position, is in the correct position for the required RHR and/or core spray system(s)."

12. On pages 122a and 123, LCO 3.5.G and Surveillance Requirement 4.5.G:

    a) In LCO 3.5.G, change"...pump discharge of these systems to the last block valve..." to "...pump discharge valve to the injection valve...".

    b) Change 4.5.G.1 from:

    > "Every month prior to the testing of the LPCI subsystem and core spray subsystem, the discharge piping of these systems shall be vented from the high point, and water flow observed."

    to

    > "The discharge piping of these subsystems and systems shall be verified filled with water from the pump discharge valve to the injection valve once per 31 days."

    c) Change 4.5.G.2 from:

    > "Following any period where the LPCI subsystems or core spray subsystems have not been maintained in a filled condition; the discharge piping of the affected subsystem shall be vented from the high point and water flow observed."

    to

    > "Following any period where these subsystems or systems have not been maintained in a filled condition; the discharge piping shall be verified filled with water from the pump discharge valve to the injection valve prior to declaring the subsystem or system operable."

    d) Delete 4.5.G.3.

    e) Change 4.5.G.4 to 4.5.G.3 and change "...tested each month." to "...tested once per 31 days."

13. On page 132, Bases Section 4.5, replace in the second paragraph:

"To increase the availability of the individual components of the Core and Containment Cooling Systems the components which make up the system i.e., instrumentation, pumps, valve operators, etc., are tested more frequently. The instrumentation is functionally tested each month. Likewise, the pumps and motor-operated valves are also tested quarterly to assure their operability. The combination automatic actuation test and monthly tests of the pumps and valve operators is deemed to be adequate testing of these systems."

with

"On a monthly basis, correct alignment shall be verified for manual, power operated, or automatic valves in ECCS and RCIC System flow paths to provide assurance that proper flow paths will exist for system operation. For the HPCI and RCIC Systems, this requirement also includes the steam flow path for the turbines and the flow controller position. This surveillance requirement does not apply to valves that cannot be inadvertently misaligned such as check valves, or to valves that are locked, sealed, or otherwise secured in position. A valve that receives an initiation signal is allowed to be in a non-accident position provided the valve will automatically reposition in the proper stroke time upon receipt of the initiation signal. The monthly frequency of this requirement is based upon engineering judgement and is supported by procedural controls governing valve operation that ensure correct valve positions. This frequency is further supported by the Inservice Testing Program, which demonstrates system pump and power operated valve operability. This combination of automatic actuation tests, periodic pump and valve testing, and monthly flow path verification is adequate to demonstrate operability of these systems."

14. On page 133, Bases Section 4.5, change the last three sentences in the paragraph at the top of the page from:

> "Between the monthly intervals at which the lines are vented, instrumentation has been provided in the Core Spray System and LPCI System to monitor the presence of water in the discharge piping. This instrumentation will be calibrated on the same frequency as the safety system instrumentation. This period of periodic testing ensures that during the interval between the monthly checks the status of the discharge piping is monitored on a continuous basis."

to

> "Instrumentation has been provided in the core Spray System and LPCI System to monitor the presence of water in the discharge piping. This instrumentation is functionally tested monthly to ensure that during the interval between the monthly checks the status of the discharge piping is monitored on a continuous basis."

15. On page 177, Surveillance Requirement 4.7.A.4:

a) Change Surveillance Requirement 4.7.A.4.a from:

> "The pressure suppression chamber-reactor building vacuum breakers and associated instrumentations including setpoint shall be checked for proper operation every three months."

to

> "The pressure suppression chamber-reactor building vacuum breakers shall be checked in accordance with the Inservice Testing Program."

Add new Surveillance Requirement 4.7.A.4.b:

> "b. Instrumentation associated with pressure suppression chamber-reactor building vacuum breakers shall be functionally tested once per 92 days."

16. On page 178, Surveillance Requirement 4.7.A.5:

    a) Change Surveillance Requirement 4.7.A.5.a from:

    "Each drywell suppression chamber vacuum breaker shall be exercised through an opening - closing cycle monthly."

    to

    "Each drywell suppression chamber vacuum breaker shall be exercised through an opening - closing cycle in accordance with the Inservice Testing Program."

    b) Change Surveillance Requirement 4.7.A.5.c from:

    "Once each operating cycle, each vacuum breaker valve shall be visually inspected to insure proper maintenance and operation."

    to

    "Each vacuum breaker valve shall be visually inspected to insure proper maintenance and operation in accordance with the Inservice Testing Program."

17. On pages 185 and 186, Surveillance Requirement 4.7.D.1:

    a) Change the format of Surveillance Requirement 4.7.D.1 to Item and Frequency as in 6.a above.

    b) Change Surveillance Requirement 4.7.D.1.a from:

    "At least once per operating cycle, the operable isolation valves that are power operated and automatically initiated shall be tested form simulated automatic initiation and for closure time."

    to

"Item	Frequency
a. The operable isolation valves that are power operated and automatically initiated shall be tested for automatic or simulated automatic initiation and for closure time."	In accordance with the Inservice Testing Program

c) Change Surveillance Requirement 4.7.D.1.b from:

"At least once per operating cycle, the instrument line excess flow check valves shall be tested for proper operation.*"

to

"Instrument line excess flow check valves shall be tested for proper operation."	In accordance with the Inservice Testing Program

d) Change Surveillance Requirement 4.7.D.1.c.(1) from:

"c. At least once per quarter:

(1.) All normally open power-operated isolation valves (except form the main stream line and Reactor Building Closed Loop Cooling Water System (RBCLCWS) power-operated isolation valves) shall be fully closed and reopened."

to

"c. All normally open power-operated isolation valves (except for main steam isolation valves) shall be fully closed and reopened."	In accordance with the Inservice Testing Program

e) Change Surveillance Requirement "4.7.D.1.(2)" to "4.7.D.1.d" and change text from:

"With the reactor at a reduced power level, fast close each main steam isolation valve, one at a time, and verify closure time."

to

"Item	Frequency
With the reactor at a reduced power level, fast close each main steam isolation valve, one at a time, and verify closure time."	In accordance with the Inservice Testing Program

f) Change Surveillance Requirement "4.7.D.1.d" to "4.7.D.1.e" and change text from:

"At least twice per week, the main steam line power-operated isolation valves shall be exercised by partial closure and subsequent reopening."

to

"Main steam isolation valves shall be exercised by partial closure and subsequent reopening."	Twice per Week

g) Delete Surveillance Requirement 4.7.D.1.e.

h) Change Surveillance Requirement 4.7.D.2 from:

"Whenever a containment isolation valve is inoperable, the position of at least one other valve in each line having an inoperable valve shall be recorded daily."

to

"Whenever a containment isolation valve is inoperable, verify the affected penetration flowpath is isolated once per 31 days."

18. On page 197, Bases for 4.7.D, primary containment isolation valves:

a) Delete next to last paragraph regarding test of RBCLCWS valves.

b) Add a new Bases paragraph at the end of Bases 4.7.D which states "Primary containment penetrations which have an inoperable isolation valve (or valves) are verified to have the penetration flow path isolated monthly. When the closed isolation device is in a high radiation area, this verification may be performed by administrative means.

19. On page 240, Surveillance Requirement 4.11.D.1;

a) Change "Once/3 months" to "In accordance with the Inservice Testing Program" in Surveillance Requirements 4.11.D.1.b and d.

b) Replace Surveillance Requirement 4.11.D.1.c with the following:

"Verify that each valve (manual, power operated, or automatic) in the system flow path that is not locked, sealed, or otherwise secured in position, is in the correct position."	Once per 31 Days

Editorial Corrections

1. On page 105, Surveillance Requirement 4.4.A.2, delete the first sentence reading "Demineralized water shall be recycled to the test tank." and revise the second sentence to read: "Pump minimum flow rate of 50 gpm shall be verified against a system head of ≥ 1,275 psig using demineralized water from the test tank."

2. On page 109, in the fourth line of the third paragraph, replace "...every..." with "...ever...".

3. On page 113, replace the phrase "Once/each operating cycle" with "Once/operating cycle" in Surveillance Requirement 4.5.A.1.f.

4. On page 115a, replace ":" with a "." at the end of Specification 3.5.B.1.

5. On page 122a, Specification 3.5.G.a, renumber specification "3.5.G.a" as specification "3.5.G.1."

6. On page 122a, Surveillance Requirement 4.5.G.3, replace "...to insure they..." to "...to ensure they...".

7. On page 133, reference to "calibration" of instrumentation is removed and wording changed for clarification to reflect a change that should have been part of Amendment 37.

8. On page 133 at the end of the first paragraph, replace "...bases." with "...basis.".

9. On page 240, Surveillance Requirement 4.11.D.1, replace the phrase "Each operating cycle" with "once/operating cycle".

II. PURPOSE OF THE PROPOSED CHANGES

General Incorporation of ASME Section XI

This proposed TS amendment incorporates the requirements of the NRC approved version of the Section XI ASME B&PV Code (Reference 1) for inspecting and testing of ASME B&PV Code class 1, 2, and 3 components. The purpose of this change is to eliminate unnecessary testing at power, consistent with the Nuclear Regulatory Commission policy (Reference 2), by consolidating portions of the Technical Specification surveillance test program, Inservice Test Program, and Weld and Support Inservice Inspection Program. The changes will assure adequate testing for operability while eliminating component wear due to excessive testing.

10 CFR 50.55a(f) requires that the plant Inservice Testing and Inspection Programs be revised periodically. The revised programs must use, to the extent practicable, the testing requirements contained in the latest edition and addenda of the ASME Code that is in effect 12 months prior to the revision. The current Inservice Testing Program was developed to meet ASME Section XI, 1980 Edition through Winter 1981 Addenda. It will be revised for the third inspection interval (currently scheduled to begin September 1996). The wording of the proposed Section 4.0.E is general enough to accommodate changes to the inservice test program without requiring future TS changes. The proposed testing program for pumps and valves follows the requirements of ASME Section XI, Paragraph IWP-3400, "Frequency of Inservice Tests," and Paragraph IWV-3400, "Inservice Tests, Category A and B Valves." In addition, testing program also follows the guidance of NRC Standard Technical Specifications (Specification 5.5.7) and the NRC Standard Review Plan 3.9.6, "Inservice Testing of Pumps and Valves," which states in part,

> "The pump and valve test programs are acceptable if they meet the requirements for establishing reference values and the periodic testing schedule of IWP-3000 and IWV-3000, respectively, of Section XI of the ASME Code. The allowable ranges of inservice test quantities, corrective actions, and bearing temperature tests for pumps are established by IWP-3000 and IWP-4000. The pump test schedule in the plant technical specification is required to comply with these rules."

This change replaces the monthly Technical Specification surveillance requirement for pumps and valves with the James A. FitzPatrick ASME B&PV Section XI Inservice Test Program (Reference 3) in a manner consistent with the Standard Technical Specifications (STS) (Reference 6). This change also revises other Surveillance Requirements to be consistent with the requirements of ASME Section XI (e.g., methodologies for determining reference data, acceptable calibration frequencies, testing of specific parameters, acceptance criteria, etc.). The effect will be to eliminate unnecessary testing of safety related pumps and valves, particularly during power operation.

Editorial Corrections

Changes identified in Section I of this amendment submittal as editorial changes can be grouped as:

1. Typographical/Punctuation Corrections

   The correction on page 115a will clarify the sentence by correcting the punctuation.

2. Editorial Changes

   Editorial changes have been made that clarify the Technical Specifications. They include clarification of the source of demineralized water for test of Standby Liquid Control pump testing (page 105), correction of a typographic error (page 109), improvement of word usage (pages 113, 122a, 133, and 240), and correction to numeration (page 122a).

3. Correction of Bases (page 133) to reflect an earlier Technical Specification Amendment

   Amendment 37 was issued on June 14, 1978 and addressed, in part, the replacement of "keep-full" instrumentation (pressure switches) with level switches on the high point vents on core spray and RHR (LPCI mode) discharge lines. The changes to Surveillance Requirement 4.5.G.4 reflected that the level switches do not require calibration. However, changes to the associated Bases on page 133 were overlooked. The changes to Bases page 133 provide clarification.

III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGES

Incorporation of ASME Section XI

This amendment replaces the existing Technical Specifications Surveillance test requirements for pumps and valves with the requirements and criteria of ASME Section XI. This revises the testing frequency of pumps and valves to be consistent with ASME Section XI. This change is both administrative and technical in nature. The replacement of multiple individual test requirements with a single requirement (Section 4.0.E) is an administrative change which has a negligible impact on plant operations and safety. The extension of the specified surveillance intervals from monthly to quarterly is a technical change.

Reactor Core Isolation Cooling (RCIC) system pump and valve testing (which is not part of the Inservice Testing Program) is also changed from monthly to once per 92 days. This makes RCIC testing consistent with ASME Section XI testing of ECCS.

The FitzPatrick Technical Specifications contain, in part, monthly pump and valve surveillance test requirements for the following systems:

Standby Liquid Control System (4.4.A)
Core Spray System and Residual Heat Removal System (4.5.A)
Containment Cooling (4.5.B)
High Pressure Coolant Injection (4.5.C)
Reactor Core Isolation Cooling System (4.5.E)
Emergency Core Cooling System - Cold Condition (4.5.F)

Primary Containment Isolation Valves (4.7.D)
Pressure Suppression Chamber-Reactor Building and Pressure Suppression Chamber-Drywell Vacuum Breakers (4.7.A.4 & 5)
Emergency Service Water System (4.11.D)

These Technical Specifications generally require that pumps and valves be tested once per month. These monthly surveillance tests (i.e., a pump functional test and a valve stroke test), demonstrate system availability by operating the starting circuits and verifying proper equipment operation. They are replaced by the requirements imposed by the new Surveillance Requirement, 4.0.E (except for RCIC), which incorporates the FitzPatrick inservice testing program, and will result in a quarterly testing cycle in place of the existing monthly tests. Retained are the pump functional tests which demonstrate pump hydraulic performance by confirming an established discharge flow rate or discharge pressure. These tests and tests on other components (e.g., injection line testable check valves) have been revised to require quarterly testing. RCIC pump functional tests and RCIC system motor operated valve testing has been revised to quarterly which is consistent with ECCS system testing and Standard Technical Specifications (Reference 6). A monthly verification is being incorporated to check proper valve position of valves that are not locked, sealed, or otherwise secured in position to provide assurance that a proper system flow path will exist for system operation.

Verification that a containment penetration with an inoperable isolation valve is properly isolated has been changed from once per day to once per 31 days. This is consistent with the new monthly verification of the proper positioning of valves in system flowpaths and is also consistent with Standard Technical Specifications 3.6.1.3, Action A.2.

Requiring the HPCI and RCIC discharge piping to be filled with water at all times when the system is required has been clarified and the requirement to verify the discharge piping of HPCI and RCIC to be filled with water prior to return to service after maintenance has also been clarified. The wording used in specifications 3.5.G, 4.5.G.1, 4.5.G.2 and 4.5.G.3 has been changed to make it consistent with Standard Technical Specifications, SR 3.5.1.2 and 3.5.3.1.

A review of the FitzPatrick FSAR and the Technical Specifications indicates no design basis licensing criteria which would preclude surveillance test extension.

In the late 1960s General Electric (GE), used simplified probabilistic techniques to establish a logical basis for both surveillance test intervals and the allowable outage times for BWR technical specifications. GE Report APED-5736 (Reference 5) and a 1968 article from the magazine Nuclear Safety (Reference 6) provide an in-depth discussion of these modeling techniques. These two documents were used as the rationale for the Bases Sections of the FitzPatrick Technical Specifications for the test intervals specified. These studies established the connection between system availability as a function of failure rates, repair times, and the duration between operability tests. They concluded that frequent system testing would provide greater assurance of system operability since the likelihood of detecting a component suffering from degradation prior to failure was increased.

These studies did not recognize the reduction on system availability due to the fact that a system is considered unavailable while being tested in a mode that prevents automatic operation. A trade-off exists between the confidence in system operability due to frequent testing and system unavailability due to testing. Also, this approach did not recognize that a component which is repeatedly tested would experience further wear and degradation compared to a component which is in a static condition awaiting operation.

Following issuance of the FitzPatrick Operating License, both the Standard Technical Specifications (STS) and the ASME Code were revised to require quarterly pump and valve testing. These changes were based, in part, on concerns for accelerated component aging due to excessive testing and on a better understanding of the relationship between test frequency and component/system availability. These changes eliminated unnecessary monthly tests which are a burden on plant personnel and result in unnecessary additional wear on the components and equipment in the safety systems, and also reduced the risk of plant transients associated with testing at power.

A reduction in testing would, therefore, provide the benefits of reducing system unavailability and the associated possibility of a plant transient during such testing at power and reducing component degradation due to extensive testing and the need for down time during component maintenance. Additionally, the ASME tests measure changes in pump and valve performance. Degradation can be detected and corrective action (i.e., further testing, repair, etc.) implemented to provide continuous assurance that safety equipment can fulfill their intended functions.

The proposed Section 4.0.E is consistent with the STS (Reference 6) for the requirement that the Technical Specifications take precedence whenever they are more stringent. However, the proposed TS Section 4.0.E differs from the STS in that the proposed Section 4.0.E allows deviations from the ASME Section XI code where relief has been requested in writing to the NRC. The STS does not address the mechanism to obtain relief. This deviation reflects current practice and is consistent with 10 CFR 50.55a.

There is one surveillance for which the STS requires a greater frequency than the quarterly testing requirements of ASME Section XI.

Surveillance Requirement 4.7.A.5.a requires each vacuum breaker in the Suppression Chamber to Drywell Vacuum Breaker System to be operated monthly. This exceeds the current quarterly stroke test required by the ASME Section XI program but is consistent with the monthly test requirement in Standard Technical Specification SR 3.6.1.8.2 which is based on the harsh environment in which the valves are located. Since the pressure suppression chamber to drywell vacuum breaker valves at the FitzPatrick Plant are located in the Reactor Building rather than in the harsh environment of the pressure suppression chamber as described in the Standard Technical Specification SR 3.6.1.8.2 Bases, the Authority proposes to make the testing frequency consistent with Pressure Suppression Chamber-Reactor Building Vacuum Breaker Surveillance Requirement 4.7.A.4.a. The valves are 30 inch diameter swing check valves with a counterweight to ensure that the valve remains seated until a pressure differential of 0.5 psid exists across the seat. Revising the frequency of the stroke test to agree with the current quarterly stroke test required by the ASME Section XI program can be justified based upon the similarity to other swing check valves tested to this frequency and a demonstration that the environment has not resulted in operability concerns.

Editorial Corrections

Various editorial or administrative changes to pages which were the subject of this amendment submittal are made to improve the consistency and clarity of the Technical Specifications. These have no adverse safety significance.

IV. EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Operation of the FitzPatrick plant in accordance with the proposed Amendment would not involve a significant hazards consideration as defined in 10 CFR 50.92, since it would not:

1. involve a significant increase in the probability or consequences of an accident previously evaluated.

   The changes identified in this proposed amendment revise surveillance testing for various systems based upon the Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code. None of these changes involves a hardware modification to the plant, a change to system operation, a change to the manner in which the system is used, or a change in the ability of the system to perform its intended function.

   The use of Section XI of the ASME B&PV Code as a basis for establishing surveillance testing and acceptance criteria will not alter existing accident analyses. This has been acknowledged and accepted by the NRC in the Standard Technical Specifications. The change to surveillance testing frequencies reduces testing at power, increases the availability of systems important to the mitigation of a DBA, and minimizes component degradation due to excessive testing. The ASME B&PV Code, Section XI testing tracks component performance allowing identification of component degradation and the code specifies that if a pump parameter enters the alert range, then the testing frequency is doubled until the cause of the degradation is determined and the condition corrected. Similarly, if a valve stroke time degrades, the valve testing frequency is increased to once per month until the cause is determined and the condition corrected.

   The editorial changes are strictly non technical in nature with no effect on existing analyses. They clarify the Technical Specifications by improving the legibility of this document.

2. create the possibility of a new or different kind of accident from those previously evaluated.

   The proposed changes involve no hardware changes, no changes to the operation of the systems, and do not change the ability of the systems to perform their intended functions. The use of ASME Section XI as the basis for testing involves the same testing alignments and practices previously used as part of either the IST program or Technical Specification Surveillance Requirements. The editorial changes have no effect on plant practices.

3. involve a significant reduction in the margin of safety.

   There are no hardware modifications, changes to system operations, or effect on the ability of systems to perform their intended function associated with the proposed changes. The proposed changes to reference pump and valve testing to Section XI of the ASME B&PV Code and remove individual Surveillance Requirements in the Technical Specifications does not relax any controls or limitations. The resulting reduction in test frequency, while reducing the possibility of detecting a degraded component prior to failure, is offset by the increased availability of systems important to plant safety and an associated reduction in component wear and degradation due to excessive testing. Additionally, the ASME testing program evaluates components for degraded performance and will identify such degradation early. There are no safety margins associated with the editorial corrections.

V. IMPLEMENTATION OF THE PROPOSED CHANGES

Implementation of the proposed changes will not adversely affect the ALARA or Fire Protection Program at the FitzPatrick plant, nor will the changes impact the environment. The results of these changes are expected to reduce the occupational doses to plant personnel since the number of tests performed in radiation areas will be reduced. The proposed change will not change the testing process currently in place to meet ASME Section XI requirements and therefore can have no impact on the Fire Protection program or the environment.

VI. CONCLUSION

This change, as proposed, does not constitute an unreviewed safety question as defined in 10 CFR 50.59. That is, it:

1. will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report;

2. will not increase the possibility for an accident or malfunction of a type different from any evaluated previously in the safety analysis report; and

3. will not reduce the margin of safety as defined in the basis for any technical specification.

The change involves no significant hazards consideration, as defined in 10 CFR 50.92.

VII. REFERENCES

1. ASME Boiler and Pressure Vessel Code, Section XI, 1980 Edition through Winter 1981, Articles IWP and IWV.

2. SECY-88-304, "Policy Issue Regarding Staff Actions to Reduce Testing at Power", dated October 26,1988.

3. Inservice Testing Program for James A. FitzPatrick Nuclear Power Plant, Second Inservice Interval, Revision 4, dated May 1, 1991.

4. APED-5736, "Guidelines for Determining Safe Test Intervals and Repair Times for Engineered Safeguards," dated April 1969.

5. "Reliability of Engineered Safety Features as a Function of Testing Frequency," Nuclear Safety Vol. 9, No. 4, July - August, 1968.

6. NUREG-1433, "Standard Technical Specifications for General Electric Boiling Water Reactors (BWR/4)", Revision 1, dated April 1995.

7. NYPA letter, J. C. Brons to NRC, dated November 20, 1989 regarding definition of the terms Demonstrate and Verify for the Technical Specifications (JPN-89-076).

8. NRC letter, D. LaBarge to J.C. Brons, dated January 3, 1990, transmitting Technical Specification Amendment 148.

9. James A. FitzPatrick Nuclear Power Plant Updated Final Safety Analysis Report, Sections 4.8, 6.0, and 9.7.1.

10. James A. FitzPatrick Nuclear Power Plant Safety Evaluation Report (SER), dated November 20, 1972, and Supplements.

Attachment III to JPN-95-053

PROPOSED TECHNICAL SPECIFICATION CHANGES
ASME SECTION XI SURVEILLANCE TESTING
MARKUP OF TECHNICAL SPECIFICATION PAGES

(JPTS-93-003)

New York Power Authority

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
Docket No. 50-333
DPR-59

TECHNICAL SPECIFICATIONS

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3.0 Continued

D. Entry into an OPERATIONAL CONDITION (mode) or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION (mode) or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through OPERATIONAL CONDITIONS (modes) required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual specifications.

E. When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in COLD SHUTDOWN within the following 24 hours. This specification is not applicable when in Cold Shutdown or Refuel Mode.

F. Equipment removed from service or declared inoperable to comply with required actions may be returned to service under administrative control solely to perform testing required to demonstrate its operability or the operability of other equipment. This is an exception to LCO 3.0.B.

4.0 Continued

that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Surveillance requirements do not have to be performed on inoperable equipment.

D. Entry into an OPERATIONAL CONDITION (mode) shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to Operational Modes as required to comply with ACTION Requirements.

INSERT A (ADD NEW 4.0.E.)

(4.0.E CONTINUES ON PAGE 30b)

Amendment No. ~~83~~, ~~134~~, ~~198~~, ~~227~~

3.0 BASES

A. This specification states the applicability of each specification in terms of defined OPERATIONAL CONDITION (mode) and is provided to delineate specifically when each specification is applicable.

B. This specification defines those conditions necessary to constitute compliance with the terms of an individual Limiting Condition for Operation and associated ACTION requirement.

C. This specification delineates the ACTION to be taken for circumstances not directly provided for in the ACTION statements and whose occurrence would violate the intent of the specification. Under the terms of Specification 3.0, the facility is to be placed in COLD SHUTDOWN within the following 24 hours. It is assumed that the unit is brought to the required OPERATIONAL CONDITION (mode) within the required times by promptly initiating and carrying out the appropriate ACTION statement.

D. This specification provides that entry into an OPERABLE CONDITION (mode) must be made with (a) the full complement of required systems, equipment or components OPERABLE and (b) all other parameters as specified in the Limiting Conditions for Operation being met without regard for allowable deviations and out of service provisions contained in the ACTION statements.

The intent of this provision is to insure that facility operation is not initiated with either required equipment or systems inoperable or other limits being exceeded. Compliance with ACTION requirements that permit continued operation of the facility for an unlimited period of time provides an acceptable level of safety for continued operation without the regard to

D. Continued

the status of the plant before or after an OPERATIONAL CONDITION (mode) change. Therefore in this case, entry into an OPERATIONAL CONDITION (mode) or other specified condition may be made in accordance with the provisions of the ACTION requirements. The provisions of this specification should not, however, be interpreted as endorsing the failure to exercise good practice in restoring systems or components to OPERABLE status before startup.

Exceptions to this provision may be made for a limited number of specifications when startup with inoperable equipment would not affect plant safety. These exceptions are stated in the ACTION statements of the appropriate specifications.

E. This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the ACTION statements for power sources, when a normal or emergency power source is not OPERABLE. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the ACTION statements associated with individual systems, subsystems, trains, components or devices to be consistent with the ACTION statement of the associated electrical power source. It allows operation to be governed by the time

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(TEXT MOVED FROM PAGE 30b)

3.0 BASES - Continued

E. Continued

limits of the ACTION statement associated with the Limiting Condition for Operation for the normal or emergency power source, and not by the individual ACTION statements for each system, subsystem, train, component or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

For example, Specification 3.9.A. requires in part that both emergency diesel generator systems be OPERABLE. The ACTION statement provides for a 7 day out-of-service time when emergency diesel generator system A or B is not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 3.0.E., all systems, subsystems, trains, components and devices supplied by the inoperable emergency power source, diesel generator system A or B, would also be inoperable. This would dictate invoking the applicable ACTION statements for each of the applicable Limiting Conditions for Operation. However, the provisions of Specification 3.0.E. permit the time limits for continued operation to be consistent with the ACTION statement for the inoperable emergency diesel generator system instead, provided the other specified conditions are satisfied. If they are not satisfied, shutdown is required in accordance with this specification.

E. Continued

As a further example, Specification 3.9.A. requires in part that two 115KV lines and reserve station transformers be available. The ACTION statement provides a 7 day out-of-service time when both required offsite circuits are not OPERABLE. If the definition of OPERABLE were applied without consideration of Specification 3.0.E., all systems, subsystems, trains, components and devices supplied by the inoperable normal power sources, both of the offsite circuits, would also be inoperable. This would dictate invoking the applicable ACTION statements for each of the applicable LCOs. However, the provisions of Specification 3 0.E. permit the time limits for continued operation to be consistent with the ACTION statement for the inoperable normal power sources instead, provided the other specified conditions are satisfied. In this case, this would mean that for one division the emergency power source must be OPERABLE (as must be the components supplied by the emergency power source) and all redundant systems, subsystems, trains, components and devices in the other division must be OPERABLE, or likewise satisfy Specification 3.0.E. (i.e., be capable of performing their design functions and have an emergency power source OPERABLE). In other words, both emergency power sources A and B must be OPERABLE and all redundant systems, subsystems, trains, components and devices in both divisions must also be OPERABLE. If these conditions are not satisfied, shutdown is required in accordance with this specification.

In Cold Shutdown and Refuel Modes, Specification 3.0.E. is not applicable, and thus the individual ACTION statement for each applicable Limiting Condition for Operation in these OPERATIONAL CONDITIONS (modes) must be adhered to.

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(TEXT MOVED FROM PAGE 30c)

3.0 Bases - Continued

F. LCO 3.0.F establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with required actions. The sole purpose of this Specification is to provide an exception to LCO 3.0.B to allow testing to demonstrate: (a) the operability of the equipment being returned to service; or (b) the operability of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the required actions is limited to the time absolutely necessary to perform the allowed testing. This Specification does not provide time to perform any other preventive or corrective maintenance.

An example of demonstrating the operability of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with the required actions and must be reopened to perform the testing.

An example of demonstrating the operability of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of testing on another channel in the other trip system. A similar example of demonstrating the operability of other equipment is taking an inopereble channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of testing on another channel in the same trip system.

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(TEXT MOVED FROM PAGE 30d)

4.0 BASES

A. This specification provides that surveillance activities necessary to insure the Limiting Conditions for Operation are met and will be performed during the OPERATIONAL CONDITIONS (modes) for which the Limiting Conditions for Operation are applicable. Provisions for additional surveillance activities to be performed without regard to the applicable OPERATIONAL CONDITIONS (modes) are provided in the individual Surveillance Requirements.

B. Specification 4.0.B establishes the limit for which the specified time interval for Surveillance Requirements may be extended. It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance (e.g., transient conditions or other ongoing surveillance or maintenance activities). It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are performed at each refueling outage and are specified with a 24 month surveillance interval. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillances that are not performed during refueling outages. The limitation of this specification is based on engineering judgement and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. The limit on extension of the normal surveillance interval ensures that the reliability confirmed by surveillance activities is not significantly reduced below that obtained from the specified surveillance interval.

C. This specification establishes the failure to perform a Surveillance Requirement within the allowed surveillance

C. Continued

interval, defined by the provisions of Specification 4.0.B, as a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when Surveillance Requirements have not been completed within the allowed surveillance interval and that the time limits of the ACTION requirements apply from the point in time it is identified that a surveillance has not been performed and not at the time that the allowed surveillance was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.C. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.B, was a violation of the OPERABILITY requirements of a Limiting Condition for Operation that is subject to enforcement action. Further, the failure to perform a surveillance within the provisions of Specification 4.0.B is a violation of a Technical Specification requirement and is, therefore, a reportable event under the requirements of 10 CFR 50.73(a)(2)(i)(B) because it is a condition prohibited by the plant Technical Specifications.

30f (TEXT MOVED FROM PAGE 30e)

4.0 BASES - Continued

C. Continued

If the allowable outage time limits of the ACTION requirements are less than 24 hours or a shutdown is required to comply with ACTION requirements, a 24-hour allowance is provided to permit a delay in implementing the ACTION requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown is required to comply with ACTION requirements or before other remedial measures would be required that may preclude completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of OPERATIONAL CONDITION (mode) changes imposed by ACTION requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.C is allowed. If a surveillance is not completed within the 24-hour allowance, the time limits of the ACTION requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the ACTION requirements are applicable at the time the surveillance is terminated.

C. Continued

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.

D. This specification establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of this specification do not apply because this would delay placing the facility in a lower CONDITION of operation.

30g (TEXT MOVED FROM PAGE 30f)

3.1 LIMITING CONDITIONS FOR OPERATION

3.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the instrumentation and associated devices which initiate the reactor scram.

Objective:

To assure the operability of the Reactor Protection System.

Specification:

A. The setpoints and minimum number of instrument channels per trip system that must be operable for each position of the reactor mode switch, shall be as shown in Table 3.1-1.

4.1 SURVEILLANCE REQUIREMENTS

4.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective:

To specify the type of frequency of surveillance to be applied to the protection instrumentation.

Specification:

A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1-1 and 4.1-2 respectively.

The response time of the reactor protection system trip functions listed below shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals.

1. Reactor High Pressure (02-3PT-55A, B, C, D)
2. Drywell High Pressure (05PT-12A, B, C, D)
3. Reactor Water Level-Low (L3) (02-3LT-101A, B, C, D)
4. Main Steam Line Isolation Valve Closure
   (29PNS-80A2, B2, C2, D2)
   (29PNS-86A2, B2, C2, D2)
5. Turbine Stop Valve Closure (94PNS-101, 102, 103, 104)
6. Turbine Control Valve Fast Closure (94PS-200A, B, C, D)
7. APRM Fixed High Neutron Flux
8. APRM Flow Referenced Neutron Flux

(TEXT MOVED FROM PAGE 30g)

30i

30g

4.0 BASES - Continued

E. This specification ensures that inservice inspection of components and inservice testing of pumps and valves will be performed in accordance with a periodically updated version of the FitzPatrick plant "Inservice Testing Program" to comply with Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. The plant program identifies classifications required by 10CFR50.55a and Regulatory Guide 1.26. Request for relief from any of these requirements is provided in writing to the NRC and is not a part of these Technical Specifications.

This specification includes a reference to Technical Specification Section 1.0.T which defines the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This reference is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. For example, the requirements of Specification 4.0.D to perform surveillance activities prior to entry into an OPERATIONAL CONDITION or other specified applicability condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps to be tested up to 96 hours after return to normal operation. As another example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

(NEW PAGE - BASES 4.0.E)

3.3.C (cont'd)

2. The average of the scram insertion times for the three fastest operable control rods of all groups of four control rods in a two-by-two array shall be no greater than:

Control Rod Notch Position Observed	Average Scram Insertion Time (Seconds)
46	0.361
38	0.977
24	2.112
04	3.764

3. The maximum scram insertion time for 90 percent insertion of any operable control rod shall not exceed 7.00 sec.

4.3.C (cont'd)

2. At 16-week intervals, 10 percent of the operable control rod drives shall be scram timed above 950 psig. Whenever such scram time measurements are made, an evaluation shall be made to provide reasonable assurance that proper control rod drive performance is being maintained.

3. All control rods shall be determined operable once each operating cycle by demonstrating the scram discharge volume drain and vent valves operable when the scram test initiated by placing the mode switch in the SHUTDOWN position is performed as required by Table 4.1-1 and by verifying that the drain and vent valves: ARE:

a. Close in less that 30 seconds after receipt of a signal for control rods to scram, and

b. Open when the scram signal is reset.

ITEM	FREQUENCY
a. VERIFIED OPEN	ONCE PER 31 DAYS
b. CYCLED FULLY CLOSED AND OPEN	IN ACCORDANCE WITH THE INSERVICE TESTING PROGRAM
c. VERIFIED TO CLOSE WITHIN 30 SECONDS AFTER RECEIPT OF AN ACTUAL OR SIMULATED SCRAM SIGNAL AND OPEN WHEN THE ACTUAL OR SIMULATED SIGNAL IS RESET.	ONCE PER 18 MONTHS

REFORMAT AND ADD MONTHLY VALVE POSITION CHECK AS SHOW AT LEFT.

Amendment No. ~~49~~, ~~62~~, ~~75~~, ~~85~~, ~~185~~ ~~207~~

3.4 LIMITING CONDITIONS FOR OPERATION

3.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the operating status of the Standby Liquid Control System.

Objective:

To assure the availability of a system with the capability to shut down the reactor and maintain the shutdown condition without control rods.

Specifications

A. Normal Operation

During periods when fuel is in the reactor and prior to startup from a cold condition, the Standby Liquid Control System shall be operable except as specified in 3.4.B below. This system need not be operable when the reactor is in the cold condition, all rods are fully inserted and Specification 3.3.A is met.

REFORMAT AS "ITEM AND "FREQUENCY"

4.4 SURVEILLANCE REQUIREMENTS

4.4 STANDBY LIQUID CONTROL SYSTEM

Applicability:

Applies to the periodic testing requirements for the Standby Liquid Control System.

Objective

To verify the operability of the Standby Liquid Control System.

Specification:

A. Normal Operation

The operability of the Standby Liquid Control System shall be verified by performance of the following tests:

1. ADD NEW SR PER INSERT B
2. At least once per month
   Demineralized water shall be recycled to the test tank. Pump minimum flow rate of 50 gpm shall be verified against a system head of ≥ 1,275 psig (USING DEMINERALIZED WATER FROM THE TEST TANK.
3. At least once during each operating cycle
   Manually initiate the system, except the explosive valves and

INSERT C

ONCE PER 18 MONTHS

Amendment No. ~~116~~

4.4 (cont'd)

ONCE PER 18 MONTHS

pump solution in the recirculation path.

4. Explode one of three primer assemblies manufactured in same batch to verify proper function. Then install the two remaining primer assemblies of the same batch in the explosive valves.

5. Demineralized water shall be injected into the reactor vessel to test that valves (except explosive valves) not checked by the recirculation test are not clogged.

6. Test that the setting of the system pressure relief valves is between 1,400 and 1,490 psig.

~~3.~~ 7. Disassemble and inspect one explosive valve so that it can be established that the valve is not clogged. Both valves shall be inspected in the course of two operating cycles.

REFORMAT AS "ITEM" AND "FREQUENCY"

TEST INTERVALS

B. Operation with Inoperable Components

When a component becomes inoperable its redundant component shall be verified to be operable immediately and daily thereafter.

INSERT C

B. Operation with Inoperable Components

From and after the date that a redundant component is made or found to be inoperable, Specification 3.4.A shall be considered fulfilled, and continued operation permitted, provided that:

1. The component is returned to an operable condition within 7 days.

ATWS requirements are satisfied at all concentrations above 10 weight percent for a minimum enrichment of 34.7 atom percent of B-10.

Figure 3.4-1 shows the permissible region of operation on a sodium pentaborate solution volume versus concentration graph. This curve was developed for 34.7% enriched B-10 and a pumping rate of 50 gpm. Each point on this curve provides a minimum of 660 ppm of equivalent natural boron in the reactor vessel upon injection of SLC solution. At a solution volume of 2200 gallons, a weight concentration of 13% sodium pentaborate, enriched to 34.7% boron-10 is needed to meet shutdown requirements. The maximum storage volume of the solution is 4780 gallons which is the net overflow volume in the SLC tank.

Boron concentration, isotopic enrichment of boron-10, solution temperature, and volume are checked on a frequency adequate to assure a high reliability of operation of the system should it every be required. Experience with pump operability indicates that monthly testing is adequate to detect if failures have occurred.

The only practical time to test the Standby Liquid Control System is during a refueling outage and by initiation from local stations. Components of the system are checked periodically as described above and make a functional test of the entire system on a frequency of more than once each refueling outage unnecessary. A test of explosive charges from one manufacturing batch is made to assure that the charges are satisfactory. A continuous check of the firing circuit continuity is provided by pilot lights in the control room.

The relief valves in the Standby Liquid Control System protect the system piping and positive displacement pumps, which are nominally designed for 1,500 psig, from overpressure. The pressure relief valves discharge back to the standby liquid control pump suction line.

B. Operation with Inoperable Components

Only one of two standby liquid control pumping circuits is needed for operation. If one circuit is inoperable, there is no immediate threat to shutdown capability, and reactor operation may continue during repairs. Assurance that the remaining system will perform its function is obtained by verifying pump operability in the operable circuit at least daily.

C. Sodium Pentaborate Solution

To guard against precipitation, the solution, including that in the pump suction piping, is kept at least 10°F above saturation temperature. Figure 3.4-2 shows the saturation temperature including 10°F margin as a function of sodium pentaborate solution concentration. Tank heater and heat tracing system are provided to assure compliance with this requirement. The set points for the automatic actuation of the tank heater and heat tracing system are established based on the solution concentration. Temperature and liquid level alarms for the system annunciate in the control room. Pump operability is checked on a frequency to assure a high reliability of operation of the system should it ever be required.

INSERT D

3.5 (cont'd)

4.5 (cont'd)

INSERT C

b.	Flow Rate Test - Core spray pumps shall deliver at least 4,265 gpm against a system head corresponding to a reactor vessel pressure greater than or equal to 113 psi above primary containment pressure.	Once/3 Months
c.	Pump Operability	Once/month
d.	Motor Operated Valve	Once/month
e.	Core Spray Header Δp Instrumentation	
	Check	Once/day
	Calibrate	Once/3 months
	Test	Once/3 months
f.	Logic System Functional Test	Once/each operating cycle
g.	Testable Check Valves	Tested for operability any time the reactor is in the cold condition exceeding 48 hours, if operability tests have not been performed during the preceding 31 days.

INSERT B

(1)

Amendment No. ~~40~~, 149 ~~204~~

3.5 (cont'd)

5. All recirculation pump discharge valves shall be operable prior to reactor startup (or closed if permitted elsewhere in these specifications).

6. If the requirements of 3.5.A cannot be met, the reactor shall be placed in the cold condition within 24 hrs.

B. Containment Cooling Mode (of the RHR System)

1. Both subsystems of the containment cooling mode, each including two RHR and two RHRSW pumps, shall be operable whenever there is irradiated fuel in the reactor vessel, prior to startup from a cold condition, and reactor coolant temperature $\geq$212°F except as specified below:

4.5 (cont'd)

5. All recirculation pump discharge valves shall be tested for operability any time the reactor is in the cold condition exceeding 48 hours, if operability tests have not been performed during the preceding 31 days.

REMOVE CHANGE BAR

B. Containment Cooling Mode (of the RHR System)

1. Subsystems of the containment cooling mode shall be demonstrated operable by performing:

ITEM / FREQUENCY

a. a pump operability and flow rate test on the RHR pumps per Surveillance Requirement 4.5.A.3.

b. a monthly operability test of the RHR containment cooling mode motor operated valves.

c.1 a monthly operability test on the RHRSW pumps and associated motor operated valves.

c.2 d. a flow rate test at least once every 3 months and verifying a flow rate of 4000 gpm for each RHRSW pump and a total flow rate of 8000 gpm for two RHRSW pumps operating in parallel.

d. f. During each five-year period, an air test shall be performed on the containment spray headers and nozzles.

REFORMAT AS "ITEM AND "FREQUENCY"

REPLACE ":" WITH "."

e. (INSERT B)

INSERT C

Amendment No. ~~26, 95, 104, 124, 148~~ 151

3.5 (Cont'd)

E. Reactor Core Isolation Cooling (RCIC) System

1. The RCIC System shall be operable whenever there is irradiated fuel in the reactor vessel and the reactor pressure is greater than 150 psig and reactor coolant temperature is greater than 212°F except from the time that the RCIC System is made or found to be inoperable for any reason, continued reactor power operation is permissible during the succeeding 7 days unless the system is made operable earlier provided that during these 7 days the HPCI System is operable.

2. If the requirements of 3.5.E cannot be met, the reactor shall be placed in the cold condition and pressure less than 150 psig within 24 hours.

3. Low power physics testing and reactor operator training shall be permitted with inoperable components as specified in 3.5.E.2 above, provided that reactor coolant temperature is $\leq$212°F.

4. The RCIC system is not required to be operable during hydrostatic pressure and leakage testing with reactor coolant temperatures between 212°F and 300°F and irradiated fuel in the reactor vessel provided all control rods are inserted.

4.5 (Cont'd)

E. Reactor Core Isolation Cooling (RCIC) System

1. RCIC System testing shall be performed as follows provided a reactor steam supply is available. If steam is not available at the time the surveillance test is scheduled to be performed, the test shall be performed within ten days of continuous operation from the time steam becomes available.

ONCE PER 92 DAYS

Item	Frequency
a. Simulated Automatic Actuation (and Restart*) Test	Once/operating cycle
b. Pump Operability (INSERT B)	Once/month
c. Motor Operated Valve Operability	Once/month
d. Flow Rate	Once/3 months
e. Testable Check Valves (INSERT E)	Tested for operability any time the reactor is in the cold condition exceeding 48 hours, if operability tests have not been performed during the preceding 92 days. (31)
f. Logic System Functional Test	Once/operating cycle

* Automatic restart on a low water level signal which is subsequent to a high water level trip.

Amendment No. 40, 107, 130, 179

3.5 (cont'd)

DELETE (INCORPORATED INTO INSERT E ON pg 121)

4.5 (cont'd)

The RCIC pump shall deliver at least 400 gpm for a system head corresponding to a reactor pressure of 1,120 psig to 150 psig.

2. When it is determined that the RCIC System is inoperable at a time when it is required to be operable, the HPCI System shall be verified to be operable immediately and daily thereafter.

3.5 (cont'd)

F. ECCS-Cold Condition

1. A minimum of two low pressure Emergency Core Cooling subsystems shall be operable whenever irradiated fuel is in the reactor, the reactor is in the cold condition, and work is being performed with the potential for draining the reactor vessel.

2. A minimum of one low pressure Emergency Core Cooling subsystem shall be operable whenever irradiated fuel is in the reactor, the reactor is in the cold condition, and no work is being performed with the potential for draining the reactor vessel.

3. Emergency Core Cooling subsystems are not required to be operable provided that the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed, and the water level above the fuel is in accordance with Specification 3.10.C.

4. With the requirements of 3.5.F.1, 3.5.F.2, or 3.5.F.3 not satisfied, suspend core alterations and all operations with the potential for draining the reactor vessel. Restore at least one system to operable status within 4 hours or establish Secondary Containment Integrity within the next 8 hours.

4.5 (cont'd)

F. ECCS-Cold Condition

Surveillance of the low pressure ECCS systems required by 3.5.F.1 and 3.5.F.2 shall be as follows:

1. Perform a flowrate test at least once every 3 months on the required Core Spray pump(s) and/or the RHR pump(s). Each Core Spray pump shall deliver at least 4,265 gpm against a system head corresponding to a reactor vessel pressure greater than or equal to 113 psi above primary containment pressure. Each RHR pump shall deliver at least 8910 gpm against a system head corresponding to a reactor vessel to primary containment differential pressure of > 20 psid. (1)

INSERT C

2. Perform AN a monthly operability test on the required Core Spray and/or LPCI motor operated valves.

3. Once each shift verify the suppression pool water level is greater than or equal to 10.33 ft. whenever the low pressure ECCS subsystems are aligned to the suppression pool.

4. Once each shift verify a minimum of 324 inches of water is available in the Condensate Storage Tanks (CST) whenever the Core Spray System(s) is aligned to the tanks.

ADD

5. ONCE PER 31 DAYS, VERIFY THAT EACH VALVE (MANUAL, POWER OPERATED OR AUTOMATIC) IN THE FLOW PATH THAT IS NOT LOCKED, SEALED OR OTHERWISE SECURED IN POSITION, IS IN THE CORRECT POSITION FOR THE REQUIRED RHR AND/OR CORE SPRAY SYSTEM(S).

Amendment No. 1, 104, 168, 174 (204)

3.5 (cont'd)

G. Maintenance of Filled Discharge Pipe

Whenever core spray subsystems, LPCI subsystems, HPCI, or RCIC are required to be operable, the discharge piping from the pump discharge of these systems to the last block valve shall be filled.

1. a. From and after the time that the pump discharge piping of the HPCI, RCIC, LPCI, or Core Spray Systems cannot be maintained in a filled

VALVE TO THE INJECTION

4.5 (cont'd)

G. Maintenance of Filled Discharge Pipe

The following surveillance requirements shall be adhered to, in order to assure that the discharge piping of the core spray subsystem, LPCI subsystem, HPCI, and RCIC are filled:

1. Every month prior to the testing of the LPCI subsystem and core spray subsystem, the discharge piping of these systems shall be vented from the high point, and water flow observed.

REPLACE WITH

THE DISCHARGE PIPING OF THESE SYSTEMS AND SUBSYSTEMS SHALL BE VERIFIED FILLED WITH WATER FROM THE PUMP DISCHARGE VALVE TO THE INJECTION VALVE.

Amendment No. ~~168~~

3.5 (cont'd)

condition, that pump shall be considered inoperable for purposes of satisfying Specifications 3.5.A, 3.5.C, and 3.5.E.

SHALL BE VERIFIED FILLED WITH WATER FROM THE PUMP DISCHARGE VALVE TO THE INJECTION VALVE PRIOR TO DECLARING THE SUBSYSTEM OR SYSTEM OPERABLE.

MOVE TO PREVIOUS PAGE

4.5 (cont'd)

THESE SUBSYSTEMS AND SYSTEMS

2. Following any period where the LPCI subsystems or core spray subsystems have not been maintained in a filled condition; the discharge piping of the affected subsystem shall be vented from the high point of the system and water flow observed.

DELETE. (REQUIREMENT INCLUDED IN 2 ABOVE)

3. Whenever the HPCI or RCIC System is lined up to take suction from the condensate storage tank, the discharge piping of the HPCI or RCIC shall be vented from the high point of the system, and water flow observed on a monthly basis.

ENSURE

3. ~~4~~ The level switches located on the Core Spray and RHR System discharge piping high points which monitor these lines to insure they are full shall be functionally tested each month. ONCE PER 31 DAYS.

H. Average Planar Linear Heat Generation Rate (APLHGR)

During power operation, the APLHGR for each type of fuel as a function of axial location and average planar exposure shall be within limits based on applicable APLHGR limit values which have been approved for the respective fuel and lattice types. These values are specified in the Core Operating Limits Report. If at anytime during reactor power operation greater than 25% of rated power it is determined that the limiting value for APLHGR is being exceeded, action shall then be initiated within 15 minutes to restore operation to within the prescribed limits. If the APLHGR is not returned to within the prescribed limits within two (2) hours, the reactor power shall be reduced to less than 25% of rated power within the next four hours, or until the APLHGR is returned to within the prescribed limits.

H. Average Planar Linear Heat Generation Rate (APLHGR)

The APLHGR for each type of fuel as a function of average planar exposure shall be determined daily during reactor operation at ≥25% rated thermal power.

4.5 BASES

The testing interval for the Core and Containment Cooling Systems is based on a quantitative reliability analysis, industry practice, judgement, and practicality. The Emergency Core Cooling Systems have not been designed to be fully testable during operation. For example, the core spray final admission valves do not open until reactor pressure has fallen to 450 psig; thus, during operation even if high drywell pressure were simulated, the final valves would not open. In the case of the HPCI, automatic initiation during power operation would result in pumping cold water into the reactor vessel which is not desirable.

The systems will be automatically actuated during a refueling outage. In the case of the Core Spray System, condensate storage tank water will be pumped to the vessel to verify the operability of the core spray header. To increase the availability of the individual components of the Core and Containment Cooling Systems the components which make up the system i.e., instrumentation, pumps, valve operators, etc., are tested more frequently. The instrumentation is functionally tested each month. Likewise, the pumps and motor-operated valves are also tested each month to assure their operability. The combination automatic actuation test and monthly tests of the pumps and valve operators is deemed to be adequate testing of these systems.

With components or subsystems out-of-service, overall core and containment cooling reliability is maintained by verifying the operability of the remaining cooling equipment. Consistent with the definition of operable in Section 4.0.C, demonstrate means conduct a test to show; verify means that the associated surveillance activities have been satisfactorily performed within the specified time interval.

The RCIC flow rate is described in the UFSAR. The flow rates to be delivered to the reactor core for HPCI, the LPCI mode of RHR, and CS are based on the SAFER/GESTR LOCA analysis. The flow rates for the LPCI mode of RHR and CS are modified by a 10 percent reduction from the SAFER/GESTR LOCA analysis. The reductions are based on a sensitivity analysis (General Electric MDE-83-0786) performed for the parameters used in the SAFER/GESTR analysis.

The CS surveillance requirement includes an allowance for system leakage in addition to the flow rate required to be delivered to the reactor core. The leak rate from the core spray piping inside the reactor but outside the core shroud is assumed in the UFSAR and includes a known loss of less than 20 gpm from the 1/4 inch diameter vent hole in the core spray T-box connection in each of the loops, and in the B loop, a potential additional loss of less than 40 gpm from a clamshell repair whose structural weld covers only 5/6 of the circumference of the pipe. Both of these identified sources of leakage occur in the space between the reactor vessel wall and the core shroud. Therefore flow lost through these leak sources does not contribute to core cooling.

The surveillance requirements to ensure that the discharge piping of the core spray, LPCI mode of the RHR, HPCI, and RCIC Systems are filled provides for a visual observation that water flows from a high point vent. This ensures that

INSERT F

MOVE TO NEXT PAGE

Amendment No. 14, 148, ~~204~~

4.5 BASES (cont'd)

the line is in a full condition. Between the monthly intervals at which the lines are vented, instrumentation has been provided in the Core Spray System and LPCI System to monitor the presence of water in the discharge piping. This instrumentation will be calibrated on the same frequency as the safety system instrumentation. This period of periodic testing ensures that during the interval between the monthly checks the status of the discharge piping is monitored on a continuous bases. ← basis.

Normally the low pressure ECCS subsystems required by Specification 3.5.F.1 are demonstrated operable by the surveillance tests in Specifications 4.5.A.1 and 4.5.A.3. Section 4.5.F specifies periodic surveillance tests for the low pressure ECCS subsystems which are applicable when the reactor is in the cold condition. These tests in conjunction with the requirements on filled discharge piping (Specification 3.5.G), and the requirements on ECCS actuation instrumentation (Specification 3.2.B), assure adequate ECCS capability in the cold condition. The water level in the suppression pool, or the Condensate Storage Tanks (CST) when the suppression pool is inoperable, is checked once each shift to ensure that sufficient water is available for core cooling.

REPLACE WITH

INSTRUMENTATION HAS BEEN PROVIDED IN THE CORE SPRAY SYSTEM AND LPCI SYSTEM TO MONITOR THE PRESENCE OF WATER IN THE DISCHARGE PIPING. THIS INSTRUMENTATION IS FUNCTIONALLY TESTED MONTHLY TO ENSURE THAT

(PROVIDES CLARIFICATION AND REMOVES REFERENCE TO CALIBRATION OF INSTRUMENTATION THAT SHOULD HAVE BEEN REMOVED AS PART OF AMENDMENT 37.)

3.7 (cont'd)

4. Pressure Suppression Chamber-Reactor Building Vacuum Breakers

a. Except as specified in 3.7.A.4.b below, two Pressure Suppression Chamber-Reactor Building Vacuum Breakers shall be operable at all times when the primary containment integrity is required. The setpoint of the differential pressure instrumentation which actuates the pressure suppression chamber reactor building vacuum breakers shall be $\leq$0.5 psi below reactor building pressure.

b. From and after the date that one of the pressure suppression chamber-reactor building vacuum breakers is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding 7 days, unless such vacuum

4.7 (cont'd)

4. Pressure Suppression Chamber-Reactor Building Vacuum Breakers

a. The pressure suppression chamber-reactor building vacuum breakers and associated instrumentations including setpoint shall be checked for proper operation every three months.

INSERT C

ADD

b. INSTRUMENTATION ASSOCIATED WITH PRESSURE SUPPRESSION CHAMBER - REACTOR BUILDING VACUUM BREAKERS SHALL BE FUNCTIONALLY TESTED ONCE PER 92 DAYS

(SEPARATE VACUUM BREAKER TESTING, WHICH IS PART OF IST, AND ASSOCIATED INSTRUMENTS, WHICH ARE NOT PART OF IST)

Amendment No 130, ~~134, 139~~

3.7 (cont'd)

breaker is sooner made operable, provided that the repair procedure does not violate primary containment integrity.

5. Pressure Suppression Chamber - Drywell Vacuum Breakers

a. When primary containment integrity is required, all drywell suppression chamber vacuum breakers shall be operable and positioned in the fully closed position except during testing and as specified in 3.7.A.5.b below.

b. One drywell suppression chamber vacuum breaker may be non-fully closed so long as it is determined to be not more than 1° open as indicated by the position lights.

c. One drywell suppression chamber vacuum breaker may be determined to be inoperable for opening.

d. Deleted

4.7 (cont'd)

5. Pressure Suppression Chamber - Drywell Vacuum Breakers

a. Each drywell suppression chamber vacuum breaker shall be exercised through an opening - closing cycle monthly. ← INSERT C

b. When it is determined that one vacuum breaker is inoperable for fully closing when operability is required, the operable breakers shall be exercised immediately, and every 15 days thereafter until the inoperable valve has been returned to normal service.

c. Once each operating cycle each vacuum breaker valve shall be visually inspected to insure proper maintenance and operation.

d. A leak test of the drywell to suppression chamber structure shall be conducted once per operating cycle; the acceptable leak rate is ≤0.25 in. water/min, over a 10 min period, with the drywell at 1 psid.

INSERT C

Amendment No. 134, 192

3.7 (cont'd)

D. Primary Containment Isolation Valves

1. Whenever primary containment integrity is required per 3.7.A.2, containment isolation valves and all instrument line excess flow check valves shall be operable, except as specified in 3.7.D.2. The containment vent and purge valves shall be limited to opening angles less than or equal to that specified below:

Valve Number	Maximum Opening Angle
27AOV-111	40°
27AOV-112	40°
27AOV-113	40°
27AOV-114	50°
27AOV-115	50°
27AOV-116	50°
27AOV-117	50°
27AOV-118	50°

CHANGE FORMAT TO ITEM AND FREQUENCY

Amendment No. ~~154~~, ~~173~~, ~~195~~

4.7 (cont'd)

c. Secondary containment capability to maintain a 1/4 in. of water vacuum under calm wind conditions with a filter train flow rate of not more than 6,000 cfm, shall be demonstrated at each refueling outage prior to refueling.

D. Primary Containment Isolation Valves

1. The primary containment isolation valves surveillance shall be performed as follows:

ITEM FREQUENCY

a. At least once per operating cycle the operable isolation valves that are power operated and automatically initiated shall be tested for simulated automatic initiation and for closure time.

INSERT C

b. At least once per operating cycle, the instrument line excess flow check valves shall be tested for proper operation.*

INSERT C

c. At least once per quarter:

(1.) All normally open power-operated isolation valves (except for the main stream line and Reactor Building Closed Loop Cooling Water System (RBCLCWS) power-operated isolation valves) shall be fully closed and reopened.

INSERT C

* The current surveillance interval for testing instrument line excess flow check valves is extended until the end of the R11/C12 refueling outage scheduled for January, 1995. This is a one-time extension, effective only for this surveillance interval. The next surveillance interval will begin upon completion of this surveillance.

3.7 (cont'd)

2. With one or more of the containment isolation valves inoperable, maintain at least one isolation valve operable in each affected penetration that is open and:

   a. Restore the inoperable valve(s) to operable status within 4 hours; or

   b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the closed position. Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under administrative control; or

   c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or a blind flange.

3. If Specifications 3.7.D.1 or 3.7.D.2 cannot be met the reactor shall be in the cold condition within 24 hrs.

Amendment No. ~~154~~, ~~154~~, ~~173~~, ~~182~~, 203

4.7 (cont'd)

INSERT C

ITEM

FREQUENCY

d (2.) With the reactor at a reduced power level, fast close each main steam isolation valve, one at a time, and verify closure time.

e. ~~d.~~ At least twice per week, the main steam line power-operated isolation valves shall be exercised by partial closure and subsequent reopening.

e. The RBCLCWS isolation valves shall be fully closed and reopened any time the reactor is in the cold condition exceeding 48 hours, if the valves have not been fully closed and reopened during the preceding 92 days.

2. Whenever a containment isolation valve is inoperable, the position of at least one other valve in each line having an inoperable valve shall be recorded daily.

VERIFY THE AFFECTED PENETRATION FLOW PATH IS ISOLATED ONCE PER 31 DAYS.

MAKES SR 4.7.D.2 CONSISTANT WITH STS AND MONTHLY VALVE POSITION CHECK

3. Not Used

4.7 BASES (cont'd)

operability results in a more reliable system.

The main steam line isolation valves are functionally tested on a more frequent interval to establish a high degree of reliability.

The primary containment is penetrated by several small diameter instrument lines connected to the reactor coolant system. Each instrument line contains a 0.25 in. restricting orifice inside the primary containment and an excess flow check valve outside the primary containment.

The RBCLCWS valves are excluded from the quarterly surveillance requirements because closure of these valves will eliminate the coolant flow to the drywell air and recirculation pump-motor coolers. Without cooling water, the drywell air and equipment temperature will increase and may cause damage to the equipment during normal plant operations. Therefore, testing of these valves would only be conducted in the cold condition.

A list of containment isolation valves, including a brief description of each valve is included in Section 7.3 of the updated FSAR.

ADD

PRIMARY CONTAINMENT PENETRATIONS WHICH HAVE AN INOPERABLE ISOLATION VALVE (OR VALVES) ARE VERIFIED TO HAVE THE PENETRATION FLOW PATH ISOLATED MONTHLY. WHEN THE CLOSED ISOLATION DEVICE IS IN A HIGH RADIATION AREA THIS VERIFICATION MAY BE PERFORMED BY ADMINISTRATIVE MEANS.

ADDS BASIS FOR MONTHLY CHECK THAT PENETRATION IS ISOLATED AND ALLOWS ADMIN VERIFICATION IN HIGH RAD AREAS CONSISTANT WITH STS

3.11 (cont'd)

D. Emergency Service Water System

1. To ensure adequate equipment and area cooling, both ESW systems shall be operable when the requirements of specification 3.5.A and 3.5.B must be satisfied, except as specified below in specification 3.11.D.2.

4.11 (cont'd)

D. Emergency Service Water System

1. Surveillance of the ESW system shall be performed as follows:

	Item	Frequency
a.	Simulated Automatic Actuation Test	ONCE/ Each operating cycle
b.	Flow Rate Test - Each ESW pump shall deliver at least 1500 gpm to its respective loop. The pump total developed head shall be greater than or equal to the corresponding point on the pump curve, reduced by a maximum of 7%, for the measured flow.	Once/3 months
c.	Pump Operability	Once/month
d.	Motor Operated Valves	Once/month

INSERT C

INSERT B

INSERT C

Amendment No. 71, 134, 223

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MARKUP OF TECHNICAL SPECIFICATION PAGES

INSERTS
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Insert A

E. Surveillance Requirements for inservice testing of components shall be applicable as follows:

1. Inservice testing of pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(f), except where specific written relief has been requested to the NRC pursuant to 10 CFR 50, Section 50.55a(f)(6)(i). The inservice testing and inspection program is based on an NRC approved edition of, and addenda to, Section XI of the ASME Boiler and Pressure Vessel Code which is in effect 12 months or less prior to the beginning of the inspection interval.

2. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice testing activities required by the Code and applicable Addenda shall be applicable as defined in Technical Specification 1.0.T.

3. The provisions of Specification 4.0.B are applicable to the frequencies specified in Technical Specification 1.0.T for performing inservice testing activities.

4. Performance of the above inservice testing activities shall be in addition to other specified Surveillance Requirements.

5. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

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Insert B

Verify each valve (manual, power operated, or automatic) in the system flowpath that is not locked, sealed or otherwise secured in position, is in the correct position.	Once per 31 Days

Insert C

In accordance with the Inservice Testing Program.

Insert D

periodic testing in accordance with the IST Program is adequate to detect if degradation has occurred. Valves in the system flowpath are verified to be in the proper position on a monthly basis. This requirement does not apply to explosive valves or to valves that cannot be inadvertently misaligned, such as check valves. Verifying the correct alignment of manual, power operated, or automatic valves in the system flowpath provides assurance that the proper flowpath will exist for system operation. The monthly frequency is based on engineering judgement and is supported by procedural controls governing valve operation that ensure correct valve positions.

Insert E

Flow Rate Test - The RCIC pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of 1120 psig to 150 psig.	Once per 92 Days

Attachment III to JPN-95-053

MARKUP OF TECHNICAL SPECIFICATION PAGES

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Insert F

On a monthly basis, correct alignment shall be verified for manual, power operated, or automatic valves in ECCS and RCIC System flow paths to provide assurance that proper flow paths will exist for system operation. For the HPCI and RCIC Systems, this requirement also includes the steam flow path for the turbines and the flow controller position. This surveillance requirement does not apply to valves that cannot be inadvertently misaligned such as check valves, or to valves that are locked, sealed, or otherwise secured in position. A valve that receives an initiation signal is allowed to be in a non-accident position provided the valve will automatically reposition in the proper stroke time upon receipt of the initiation signal. The monthly frequency of this requirement is based upon engineering judgement and is supported by procedural controls governing valve operation that ensure correct valve positions. This frequency is further supported by the Inservice Testing Program, which demonstrates system pump and power operated valve operability. This combination of automatic actuation tests, periodic pump and valve testing, and monthly flow path verification is adequate to demonstrate operability of these systems.