TECHNICAL SPECIFICATIONS

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3.0 Continued

G. Special Operations LCOs in Section 3.12 allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with the Special Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations LCO shall be met. When a Special Operations LCO is not desired to be met, entry into an OPERATIONAL CONDITION (mode) or other specified condition shall only be made in accordance with the other applicable specifications.

4.0 Continued

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.

G. Special Operations LCOs in Section 3.12 allow specified TS requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the OPERATIONAL CONDITION (mode) or other specified condition not directly associated with or required to be changed to perform the special test or operation will remain in effect.

The applicability of a Special Operations LCO represents a condition not necessarily in compliance with the normal requirements of TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operations LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operations LCO, the requirements of the Special Operations LCO shall be followed. When a Special Operations LCO requires another LCO to be met, only the requirements of the LCO statement are required to be met (i.e., should the requirements of this other LCO not be met, the ACTIONS of the Special Operations LCO apply, not the ACTIONS of the other LCO). However, there are instances where the Special Operations LCO ACTIONS may direct the other LCOs' ACTIONS be met.

Surveillances of the other LCO are not required to be met, unless specified in the Special Operations LCO. If conditions exist such that the Applicability of any other LCO is met, all the other LCOs' requirements (ACTIONS and SR) are required to be met concurrent with the requirements of the Special Operations LCO.

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.

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.

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

3.5 (cont'd)

a. From and after the date that the HPCI System is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding 7 days unless such system is sooner made operable, provided that during such 7 days all active components of the Automatic Depressurization System, the Core Spray System, LPCI System, and Reactor Core Isolation Cooling System are operable.

b. If the requirements of 3.5.C.1 cannot be met, the reactor shall be placed in the cold condition and pressure less than 150 psig within 24 hrs.

2. 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.C.1 above.

4.5 (cont'd)

a. When it is determined that the HPCI System is inoperable the RCIC, both LPCI subsystems, both core spray subsystems, and the ADS System actuation logic shall be verified to be operable immediately. The RCIC System and ADS System logic shall be verified to be operable daily thereafter.

3.5 (cont'd)

2. If the requirements of 3.5.D.1 cannot be met, the reactor shall be placed in the cold condition and pressure less than 100 psig within 24 hr.

3. Low power physics testing and reactor operator training shall be permitted with inoperable ADS components, provided that reactor coolant temperature is $\leq$212 °F and the reactor vessel is vented or reactor vessel head is removed.

4.5 (cont'd)

2. A logic system functional test.

   a. When it is determined that two valves of the ADS are inoperable, the ADS System actuation logic for the operable ADS valves and the HPCI System shall be verified to be operable immediately and at least weekly thereafter.

   b. When it is determined that more than two relief/safety valves of the ADS are inoperable, the HPCI System shall be verified to be operable immediately.

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.

4.5 (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.	Pump Operability	Once/month
c.	Motor Operated Valve Operability	Once/month
d.	Flow Rate	Once/3 months
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 31 days.
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.

3.6 (cont'd)

a. ≤20°F when to the left of curve C.

b. ≤100°F when on or to the right of curve C.

3. Non-Nuclear Heatup and Cooldown

During heatup by non-nuclear means (mechanical), cooldown following nuclear shutdown and low power physics tests the Reactor Coolant System pressure and temperature shall be on or to the right of the curve B shown in Figure 3.6-1 Part 1, 2, or 3 and the maximum temperature change during any one hour shall be ≤100°F.

4. Core Critical Operation

During all modes of operation with a critical core (except for low power physics tests) the reactor Coolant System pressure and temperature shall be at or to the right of the curve C shown in Figure 3.6-1 Part 1, 2, or 3 and the maximum temperature change during any one hour shall be ≤100°F.

4.6 (cont'd)

3. Non-Nuclear Heatup and Cooldown

During heatup by Non-Nuclear means, cooldown following nuclear shutdown and low power physics tests, the reactor coolant system pressure and temperature shall be recorded every 30 minutes until two consecutive temperature readings are within 5°F of each other.

4. Core Critical Operation

During all modes of operation with a critical core (except for low power physics tests) the reactor Coolant System pressure and temperature shall be recorded within 30 minutes prior to withdrawal of control rods to bring the reactor critical and every 30 minutes during heatup until two consecutive temperature readings are within 5°F of each other.

3.6 (cont'd)

2. If Specification 3.6.E.1 is not met, the reactor shall be placed in a cold condition within 24 hours.

3. Low power physics testing and reactor operator training shall be permitted with inoperable components as specified in Specification 3.6.E.1 above, provided that reactor coolant temperature is $\leq$212 °F and the reactor vessel is vented or the reactor vessel head is removed.

4. The provisions of Specification 3.0.D are not applicable.

4.6 (cont'd)

2. At least one safety/relief valve shall be disassembled and inspected every 24 months.

3. The integrity of the nitrogen system and components which provide manual and ADS actuation of the safety/relief valves shall be demonstrated at least once every 3 months.

4. Manually open each safety/relief valve while bypassing steam to the condenser and observe a $\geq$10% closure of the turbine bypass valves, to verify that the safety/relief valve has opened. This test shall be performed at least every 24 months while in the RUN mode and within the first 12 hours after steam pressure and flow are adequate to perform the test.

3.6 and 4.6 BASES (cont'd)

Fig. 3.6-1, curve B, provides limitations for plant heatup and cooldown when the reactor is not critical or during low power physics tests. The thermal limitation is based on maximum heatup and cooldown rates of 100°F/hr in any one-hour period.

Fig. 3.6-1, curve C, establishes operating limits when core is critical. These limits include a margin of 40°F as required by 10 CFR 50 Appendix G.

The requirements for cold boltup of the reactor vessel closure are based on NDT temperature plus a 60°F factor of safety. This factor is based on the requirements of the ASME Code to which the vessel was built. For Fig. 3.6-1, curves A, B and C, margins are only added to the low temperature portion of the curve where non-ductile failure is a concern. The closure flanges have an NDT temperature not greater than 30°F and are not subject to any appreciable neutron radiation exposure. Therefore, the minimum temperature of the flanges when the studs are in tension is 30°F plus 60°F, or 90°F.

3.12 LIMITING CONDITIONS FOR OPERATION

3.12 SPECIAL OPERATIONS

Applicability:

Applies to the status of systems during special operations.

Objective:

To allow performance of special operations.

Specification:

A. Inservice Leak and Hydrostatic Testing Operation

The reactor may be considered to be in COLD SHUTDOWN with reactor coolant temperature between 212°F and 300°F and the reactor vessel not vented, to allow performance of inservice leak or hydrostatic testing provided the following LCOs are met:

1. LCO 3.5.F, "ECCS-Cold Condition," a minimum of two low pressure subsystems shall be operable;

2. LCO 3.7.B, "Standby Gas Treatment System;"

3. LCO 3.7.C, "Secondary Containment;" and

4. LCO 3.9, "Auxiliary Electrical Systems," the necessary systems shall be operable to support equipment required to be operable.

5. With the above requirements not met, immediately suspend activities that could increase reactor coolant temperature or pressure and reduce reactor coolant temperature to less than 212°F within 24 hours.

4.12 SURVEILLANCE REQUIREMENTS

4.12 SPECIAL OPERATIONS

Applicability:

Applies to periodic testing of systems during special operations.

Objective:

To verify operability of required systems during special operations.

Specification:

A. Inservice Leak and Hydrostatic Testing Operation

Perform the applicable surveillance requirements for the required LCOs.

3.12 and 4.12 BASES

A. Inservice Leak and Hydrostatic Testing Operation

The purpose of this Special Operations LCO is to allow certain reactor coolant pressure tests to be performed in COLD SHUTDOWN when the metallurgical characteristics of the reactor pressure vessel (RPV) require the pressure testing at temperatures greater than 212°F (normally corresponding to HOT SHUTDOWN).

Allowing the reactor to be considered in COLD SHUTDOWN during hydrostatic or leak testing, when reactor coolant temperature is >212°F, effectively provides an exception to HOT SHUTDOWN requirements, including operability of primary containment and the full compliment of redundant Emergency Core Cooling Systems. Since the hydrostatic or leak tests are performed nearly water solid, at low decay heat values, and near COLD SHUTDOWN conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized. In addition, secondary containment integrity will be maintained, in accordance with this Special Operations LCO, and the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment.

In the event of a large primary system leak, the reactor vessel would rapidly depressurize, allowing the low pressure core cooling systems to operate. The capability of these systems, as required by this Special Operations LCO, would be adequate to keep the core flooded under this low decay heat load condition. Small system leaks would be detected by leakage inspections before significant inventory loss occurred.

For the purposes of this test, the protection provided by normally required COLD SHUTDOWN applicable LCOs, in addition to the requirements of this Special Operations LCO, will ensure acceptable consequences during normal hydrostatic test conditions and during postulated accident conditions.

Attachment II to JPN-96-005

SAFETY EVALUATION

INSERVICE LEAK AND HYDROSTATIC TESTING OPERATION

(JPTS-95-004)

New York Power Authority

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

I. DESCRIPTION OF THE PROPOSED CHANGES

Section 1 describes technical changes to the James A. FitzPatrick Technical Specifications that affect system operability requirements during hydrostatic and system leakage (pressure) testing of the reactor coolant system. These changes, with minor exceptions, adopt the Special Operations section from Standard Technical Specifications (NUREG-1433).

In addition to the technical changes, Section 2 describes editorial changes to improve the table of contents, relocate text, use consistent terminology, and reflect the addition of new pages to the Technical Specifications.

1. Technical Changes

Page 30b

Add Specification 3.0.G as follows:

"G. Special Operations LCOs in Section 3.12 allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with the Special Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations LCO shall be met. When a Special Operations LCO is not desired to be met, entry into an OPERATIONAL CONDITION (mode) or other specified condition shall only be made in accordance with the other applicable specifications."

Page 30e

Add Specification 3.0.G Bases as follows:

"G. Special Operations LCOs in Section 3.12 allow specified TS requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the OPERATIONAL CONDITION (mode) or other specified condition not directly associated with or required to be changed to perform the special test or operation will remain in effect.

The applicability of a Special Operations LCO represents a condition not necessarily in compliance with the normal requirements of TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operations LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operations LCO, the requirements of the Special Operations LCO shall be followed. When a Special Operations LCO requires another LCO to be met, only the requirements of the LCO statement are required to be met (i.e., should the requirements of this other LCO not be met, the ACTIONS of the Special Operations LCO apply, not the ACTIONS of the other LCO). However, there are instances where the Special Operations LCO ACTIONS may direct the other LCOs' ACTIONS be met.

Surveillances of the other LCO are not required to be met, unless specified in the Special Operations LCO. If conditions exist such that the Applicability of any other LCO is met, all the other LCOs' requirements (ACTIONS and SR) are required to be met concurrent with the requirements of the Special Operations LCO."

Page 118

Delete Specification 3.5.C.3, which states:

"3. The HPCI 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."

Page 120

Delete Specification 3.5.D.4, which states:

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

Page 121

Delete Specification 3.5.E.4, which states:

"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."

Page 137

Delete the following from Specification 3.6.A.2:

"Specifications 3.5.C, 3.5.D, 3.5.E and 3.6.E which would become effective because of an increase in reactor coolant temperature above 212°F or pressures above 100 and 150 psig are not required while conducting the RCS hydrostatic pressure and leakage tests between 212°F and 300°F provided all control rods are fully inserted."

Page 143

Delete Specification 3.6.E.5, which states:

"5. The safety and safety/relief valves are 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."

Page 148

Delete the following from Specification 3.6 and 4.6 Bases:

"Specification 3.6.A.2 identifies four LCOs that become effective with increased reactor coolant temperature or pressure but are not in effect during the hydrostatic and leakage tests. This is necessary because, as reactor fluence increases, the minimum test temperature and pressure rises into ranges normally associated with startup or hot shutdown. RCS pressure and temperature are used throughout the Technical Specifications as a basis for establishing plant mode and system operability requirements. Some LCOs and restrictions cannot be satisfied during the test at elevated temperatures. For example, Specifications 3.5.C.1 and 3.5.E.1 require that HPCI and RCIC be operable when reactor pressure exceeds 150 psig and 212°F. HPCI and RCIC cannot be made operable during the test because piping normally filled with steam is filled with water during the test.

Hydrostatic and leakage tests shall be terminated before the reactor coolant temperature exceeds 300°F. This temperature limit is based on providing a 50°F band for operating flexibility between the 300°F limit and the highest estimated minimum testing temperature at 32 EFPY (approximately 250°F).

The protection provided by LCOs applicable during cold shutdown plus the requirement that all control rods be fully inserted are adequate to ensure protection of public health and safety. The hydrostatic test is performed once every 10 years while the leakage test is performed after each refueling when conditions are similar to cold shutdown (i.e., after the reactor has been shutdown and decay heat and the energy stored in the core is very low). The consequences of accidents (small and large break LOCAs, MSLB, etc.) are bounded by analyses that assume full power operation. Specification 3.5.A requires the low pressure ECCS systems to be operable. Specifications 3.7.A, 3.7.B and 3.7.C require the containment, SGTS and secondary containment to be operable. Specifications 3.2.A, 3.2.B and Appendix B, Specification 3.8 require instrumentation that initiate containment, low pressure ECCS, SGTS and secondary containment be operable. Emergency power is required by Specification 3.9.B."

Page 244a

Add Specification 3.12 as follows:

"3.12 LIMITING CONDITIONS FOR OPERATION

3.12 SPECIAL OPERATIONS

Applicability:

Applies to the status of systems during special operations.

Objective:

To allow performance of special operations.

Specification:

A. Inservice Leak and Hydrostatic Testing Operation

The reactor may be considered to be in COLD SHUTDOWN with reactor coolant temperature between 212°F and 300°F and the reactor vessel not vented, to allow performance of inservice leak or hydrostatic testing provided the following LCOs are met:

1. LCO 3.5.F, "ECCS-Cold Condition," a minimum of two low pressure subsystems shall be operable;

2. LCO 3.7.B, "Standby Gas Treatment System;"

3. LCO 3.7.C, "Secondary Containment;" and

4. LCO 3.9, "Auxiliary Electrical Systems," the necessary systems shall be operable to support equipment required to be operable.

5. With the above requirements not met, immediately suspend activities that could increase reactor coolant temperature or pressure and reduce reactor coolant temperature to less than 212°F within 24 hours."

Page 244a

Add Specification 4.12 as follows:

"4.12 SURVEILLANCE REQUIREMENTS

4.12 SPECIAL OPERATIONS

Applicability:

Applies to periodic testing of systems during special operations.

Objective:

To verify operability of required systems during special operations.

Specification:

A. Inservice Leak and Hydrostatic Testing Operation

Perform the applicable surveillance requirements for the required LCOs."

Page 244b (new page)

Add Section 3/4.12 Bases as follows::

"3.12 and 4.12 BASES

A. Inservice Leak and Hydrostatic Testing Operation

The purpose of this Special Operations LCO is to allow certain reactor coolant pressure tests to be performed in COLD SHUTDOWN when the metallurgical characteristics of the reactor pressure vessel (RPV) require the pressure testing at temperatures greater than 212°F (normally corresponding to HOT SHUTDOWN).

Allowing the reactor to be considered in COLD SHUTDOWN during hydrostatic or leak testing, when reactor coolant temperature is >212°F, effectively provides an exception to HOT SHUTDOWN requirements, including operability of primary containment and the full compliment of redundant Emergency Core Cooling Systems. Since the hydrostatic or leak tests are performed nearly water solid, at low decay heat values, and near COLD SHUTDOWN conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized. In addition, secondary containment integrity will be maintained, in accordance with this Special Operations LCO, and the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment.

In the event of a large primary system leak, the reactor vessel would rapidly depressurize, allowing the low pressure core cooling systems to operate. The capability of these systems, as required by this Special Operations LCO, would be adequate to keep the core flooded under this low decay heat load condition. Small system leaks would be detected by leakage inspections before significant inventory loss occurred.

For the purposes of this test, the protection provided by normally required COLD SHUTDOWN applicable LCOs, in addition to the requirements of this Special Operations LCO, will ensure acceptable consequences during normal hydrostatic test conditions and during postulated accident conditions."

2. Editorial Changes

Page i

Change page number for LCO/SR 3.1/4.1 from "30g" to "30h."

Page ii

Move the section headings "LIMITING CONDITIONS FOR OPERATION" and "SURVEILLANCE REQUIREMENTS" to the top of the page.

Delete blank line between "3.9 Auxiiiary Electrical Systems" and "A. Normal and Reserve AC Power Systems."

Relocate LCO/SR 3.11/4.11.D and E from page iii.

Page iii

Add the section headings "LIMITING CONDITIONS FOR OPERATION" and "SURVEILLANCE REQUIREMENTS" to the top of the page.

Delete "DELETED" for page 244a and replace with LCO/SR "3.12/4.12 Special Operations" and LCO/SR "A. Inservice Leak and Hydrostatic Testing Operation."

Page 30b

Relocate Bases for LCO 3.0.A, 3.0.B, 3.0.C, 3.0.D, and 3.0.E from page 30b to page 30c.

Page 30c

Relocate the remainder of the Bases for LCO 3.0.E from page 30c to page 30d.

Page 30d

Relocate Bases for LCO 3.0.F from page 30d to page 30e.

Page 30e

Relocate Bases for SR 4.0.A, 4.0.B, and 4.0.C from page 30e to page 30f.

Page 30f

Relocate the remainder of the Bases for SR 4.0.C and the Bases for SR 4.0.D from page 30f to page 30g.

Page 30g

Relocate LCO/SR 3.1/4.1 from page 30g to new page 30h.

Page 118

Revise SR 4.5.C.1.a as follows:

Change "HPCI subsystem" to "HPCI System," "the LPCI subsystem" to "both LPCI subsystems," "RCIC system" to "RCIC System," and "ADS subsystem" to "ADS System."

Revised Specification to read:

"When it is determined that the HPCI System is inoperable the RCIC, both LPCI subsystems, both core spray subsystems, and the ADS System actuation logic shall be verified to be operable immediately. The RCIC System and ADS System logic shall be verified to be operable daily thereafter."

Page 120

Revise SR 4.5.D.2.a as follows:

Change "ADS subsystem" to "ADS System" and "HPCI Subsystem" to "HPCI System."

Revised Specification to read:

"When it is determined that two valves of the ADS are inoperable, the ADS System actuation logic for the operable ADS valves and the HPCI System shall be verified to be operable immediately and at least weekly thereafter."

Page 244a

Delete "Pages 244a-244w DELETED."

II. PURPOSE OF THE PROPOSED CHANGES

1. Technical Changes

The Authority uses the guidance in NRC Generic Letter 88-11, "NRC Position on Radiation Embrittlement of Reactor Vessel Materials and Its Impact on Plant Operations," for calculation of the reactor vessel pressure and temperature (P-T) limits for hydrostatic and system leakage (pressure) testing of the reactor coolant system. The P-T curves defining these limits are periodically recalculated to consider the results of analyses of irradiated surveillance specimens to account for accumulated reactor fluence. At the current point in FitzPatrick reactor vessel life, P-T curve limitations are such that reactor coolant temperatures above 212°F are expected during pressure tests.

The purpose of the proposed technical changes is to allow reactor coolant system pressure tests to be performed while remaining in the Cold Shutdown Mode. Primary containment integrity is not required in the Cold Shutdown Mode thus allowing unrestricted access to the primary containment for the performance of inspections. The changes will also allow outage activities on other systems to continue. The changes, with minor exceptions, adopt Special Operations Section 3.10.1, "Inservice Leak and Hydrostatic Testing Operation," from Standard Technical Specifications (STS), NUREG-1433. Minor exceptions are required to ensure consistency within FitzPatrick TS, reflect differences between FitzPatrick TS and STS, and ensure the same level of ECCS redundancy afforded by STS during pressure testing. These exceptions will be eliminated when the FitzPatrick TS are converted to STS.

Technical Specification Amendment 179 was issued on March 9, 1992 to allow the High Pressure Coolant Injection, Reactor Core Isolation Cooling, Safety Relief Valves, and Automatic Depressurization Systems to be inoperable during the performance of reactor coolant system pressure tests at temperatures up to 300°F. These exceptions to the normal system operability requirements are permissible because pressure tests are performed with the reactor shutdown, in nearly water solid conditions, with low decay heat (i.e., heat flux is approximately 1 percent of the full power value within a few hours of shutdown). The proposed changes will retain the exceptions for these systems because operability of these systems is not required with the reactor in the Cold Shutdown Mode. The effect of the proposed changes is to expand the list of exceptions to the normal operability requirements to be consistent with STS (NUREG-1433).

2. Editorial Changes

Editorial changes improve the table of contents, relocate text, ensure consistent use of terminology, or reflect the addition of new TS pages.

III. SAFETY IMPLICATIONS OF THE PROPOSED CHANGES

1. Technical Changes

Allowing the reactor to be considered in the Cold Shutdown Mode during reactor coolant system pressure tests, with reactor coolant temperature between 212°F and 300°F, effectively provides an exception to Hot Shutdown requirements, including maintaining primary containment integrity and operability of the full compliment of redundant Emergency Core Cooling Systems. Since pressure tests are performed nearly water solid, at low decay heat values, and near Cold Shutdown conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized.

An analysis of a High Energy Line Break (HELB) was performed (Reference 1) to determine the response of the secondary containment to a HELB during a reactor coolant system hydrostatic test. Reactor coolant system pressure and temperature were conservatively assumed to be 350°F and 1250 psia, respectively, for this analysis. In addition, the primary containment, including the drywell head, was assumed to be open during the test in order to maximize the energy release to the secondary containment. The analysis demonstrates that in the event of a HELB during a hydrostatic test, the secondary containment will remain intact and environmental qualification of equipment within the secondary containment will not be jeopardized. Since secondary containment integrity will be maintained, in accordance with the Special Operations LCO, the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing.

The requirements of the Special Operations LCO provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment described in Reference 2. Therefore, these requirements will limit potential radiation releases to the environment.

In the event of a large primary system leak, the reactor vessel would rapidly depressurize, allowing the low pressure core cooling systems to operate. The capability of these systems, as required by the Special Operations LCO would be adequate to keep the core flooded under this low decay heat load condition. Small system leaks would be detected by leakage inspections before significant inventory loss occurred.

During reactor coolant system pressure tests, the protection provided by normally required Cold Shutdown applicable LCOs, in addition to the requirements of the Special Operations LCO, will ensure acceptable consequences during normal testing conditions and during postulated accident conditions.

Technical Specification Effects

The proposed changes allow reactor coolant system pressure testing to be performed in Cold Shutdown when the metallurgical characteristics of the reactor pressure vessel (RPV) require the pressure testing be performed at temperatures greater than 212°F (normally corresponding to Hot Shutdown). TS requirements for the following systems or components are affected by the proposed changes:

- Primary Containment Isolation System
- Accident Monitoring Instrumentation
- Core Spray System
- Low Pressure Coolant Injection System
- Residual Heat Removal (RHR) Cross-Tie Valve Position
- RHR Spent Fuel Pool Cooling
- RHR Containment Cooling
- Reactor Coolant System Chemistry
- Reactor Coolant System Leakage
- Shock Suppressors (Snubbers)
- Primary Containment
- Auxiliary Electrical Systems
- Control Room Ventilation
- Crescent Area Ventilation

The specific requirements that will no longer be in effect during reactor coolant system pressure testing and their potential safety significance are discussed below.

Specification 3.2.A: Requires that instrumentation which initiates primary containment isolation be operable whenever primary containment integrity is required. Primary containment integrity will not be required per Specification 3.7.A.2; therefore, the safety function provided by Specification 3.2.A is not required.

Specification 3.2.H: Requires the stack, turbine building ventilation, radwaste building ventilation, and containment high range radiation monitors be operable whenever the reactor is in the Run, Startup/Hot Standby, and Hot Shutdown Modes. Proposed Specification 3.12.A will allow the reactor to be considered in Cold Shutdown during hydrostatic and system leakage tests; therefore these radiation monitors will not be required to be operable during testing. These radiation monitors provide information to the operator for use in assessing plant conditions following an accident. Since the potential for failed fuel and a subsequent increase in coolant activity is minimized during hydrostatic and system leakage testing, the safety function provided by Specification 3.2.H is not required. The containment high range radiation monitors also provide primary containment isolation signals; however, since primary containment integrity is not required during hydrostatic and system leakage tests, the isolation function provided by these radiation monitors is not required.

Specification 3.5.A.1: Requires both Core Spray Subsystems be operable whenever irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition. Since the core will remain in a subcritical condition during hydrostatic and system leakage testing, the safety function provided by Specification 3.5.A.1 is not required. Proposed Specification 3.12.A will require a minimum of two low pressure emergency core cooling subsystems be operable per Specification 3.5.F.1 during hydrostatic and system leakage testing of the reactor coolant system.

Specification 3.5.A.3: Requires both LPCI subsystems be operable whenever irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition. Since the core will remain in a subcritical condition during hydrostatic and system leakage testing, the safety function provided by Specification 3.5.A.3 is not required. Proposed Specification 3.12.A will require a minimum of two low pressure emergency core cooling subsystems be operable per Specification 3.5.F.1 during hydrostatic and system leakage testing of the reactor coolant system.

Specification 3.5.A.3.b: Requires the motor-operated and manually-operated RHR cross-tie valves be locked closed whenever reactor water temperature is greater than 212°F. The intent of this specification is to prevent a loss of both LPCI subsystems during a DBA LOCA due to a diversion of all LPCI flow to the severed recirculation loop. Proposed Specification 3.12.A will allow the reactor to be considered in Cold Shutdown during hydrostatic and system leakage tests; therefore these valves will not be required to be locked closed during testing. Due to the low reactor coolant temperature and decay heat loads during hydrostatic testing, sufficient time would be available to close the subject valves, if required to ensure core cooling. Therefore, the safety function provided by Specification 3.5.A.3.b is not required.

Specification 3.5.A.4.b: Requires that the RHR System shall not supply cooling to the spent fuel pool when the reactor coolant temperature is above 212°F. The intent of this specification is to ensure availability of both LPCI subsystems in the event of a LOCA. Due to the low reactor coolant temperature and decay heat loads during hydrostatic testing, sufficient time would be available to realign LPCI, if required to ensure core cooling. Therefore, the safety function provided by Specification 3.5.A.4.b is not required.

Specification 3.5.B: Requires both subsystems of the containment cooling mode (of the RHR System) be operable whenever there is irradiated fuel in the reactor vessel, prior to startup from a cold condition, and reactor coolant temperature is greater than or equal to 212°F. The function of the containment cooling mode is to remove heat energy from the containment in the event of a LOCA. This function ensures primary containment integrity is maintained following a LOCA by maintaining containment pressure and temperature within design limits. Since primary containment integrity will not be required during hydrostatic and system leakage tests per Specification 3.7.A.2, the safety function provided by Specification 3.5.B is not required.

Specification 3.6.C.1: Establishes limits for reactor coolant system specific activity limits. Specification 3.6.C.5 requires the reactor be placed in the cold condition if limits are exceeded. Allowing the reactor to be considered in Cold Shutdown with reactor coolant system temperature above 212°F effectively provides an exception to the requirements of Specification 3.6.C.1. The intent of Specification 3.6.C.1 is to limit the exposure at the site boundary in the event of a main steam line break outside the primary containment. During hydrostatic and system leakage tests of the reactor coolant system, the main steam line isolation valves remain closed in order to pressurize the reactor coolant system. Therefore, the safety function provided by Specification 3.6.C.1 is not required.

Specification 3.6.C.4: Establishes limits for reactor coolant water conductivity and chloride concentration. Specification 3.6.C.5 requires the reactor be placed in the cold condition within 24 hours if limits are exceeded. Allowing the reactor to be considered in Cold Shutdown with reactor coolant system temperature above 212°F effectively provides an exception to the requirements of Specification 3.6.C.4. The intent of Specification 3.6.C.4 is to minimize corrosion of the reactor coolant system. The major benefit of cold shutdown is to reduce the temperature dependent corrosion rates and provide time for the Reactor Water Cleanup System to reestablish purity of the reactor coolant. Since hydrostatic and leakage tests of the reactor coolant system are infrequently performed tests (normally once per operating cycle) of relatively short duration (normally less than 3 days) an exception to the requirements of this specification will have minimal impact on corrosion of the reactor coolant system.

Specification 3.6.D.1: Requires that reactor coolant system leakage rates be within specified limits whenever irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212°F. Leakage limits are based on the predicted and experimentally observed behavior of pipe cracks. The intent of this specification is to provide early indication of potential flaws in the reactor coolant pressure boundary. Since the reactor coolant pressure boundary is visually inspected to detect leaks during hydrostatic and system leakage testing, the safety function provided by Specification 3.6.D.1 is not required.

Specification 3.6.D.4: Requires the Primary Containment Sump Monitoring System and the Continuous Atmosphere Monitoring System be operable when the reactor coolant leakage limits are in effect. Since reactor coolant leakage limits will not be in effect during hydrostatic and system leakage tests, leakage detection systems will also not be required to be operable. Visual inspection of the reactor coolant system during hydrostatic and system leakage tests satisfies the safety function provided by leakage detection systems.

Specification 3.6.I: Requires all snubbers to be operable except during cold shutdown and refueling. During cold shutdown and refueling, only those snubbers shall be operable which are on systems required to be operable. Since proposed Specification 3.12.A allows the reactor to be considered in the Cold Shutdown Mode during hydrostatic and system leakage testing with reactor coolant temperature above 212°F, an exception is provided to the snubber operability requirements. Snubbers are designed to prevent unrestrained pipe motion under dynamic loads as might occur during an earthquake or severe transient, while allowing normal thermal motion during startup and shutdown. During normal operation, a period of 72 hours is allowed for repair or replacement of an inoperable snubber prior to taking any other action. Since inoperable snubbers are permitted for up to 72 hours during normal operation, providing an exception to snubber operability requirements for the short duration of hydrostatic and system leakage testing is not safety significant.

Specification 3.7.A.1: Requires that torus water level and torus water temperature be maintained within specified limits whenever reactor coolant temperature is above 212°F and irradiated fuel is in the reactor vessel. Since proposed Specification 3.12.A allows the reactor to be considered in the Cold Shutdown Mode during hydrostatic and system leakage testing with reactor coolant temperature above 212°F, an exception is provided to the torus water level and water temperature limits. The purpose of these torus water level and water temperature limits is to ensure that peak primary containment pressures and temperatures do not exceed maximum allowable values during a postulated DBA or any transient resulting in heatup of the torus. Since primary containment integrity will not be required during hydrostatic and system leakage tests per Specification 3.7.A.2, the safety function provided by Specification 3.7.A.1 is not required. SR 4.5.F.3 requires that torus water level be maintained greater than or equal to 10.33 feet whenever a low pressure emergency core cooling system is aligned to the torus. This SR ensures sufficient water is available for core cooling.

Specification 3.7.A.2: Requires that primary containment integrity be maintained at all times when the reactor is critical or reactor water temperature is above 212°F and fuel is in the reactor vessel. Since proposed Specification 3.12.A allows the reactor to be considered in the Cold Shutdown Mode during hydrostatic and system leakage testing with reactor coolant temperature above 212°F, an exception is provided to the requirement to establish primary containment integrity. Since the hydrostatic or leak tests are performed nearly water solid, at low decay heat values, and near Cold Shutdown conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity above the limits specified in LCO 3.6.C, "Coolant Chemistry," are minimized. In addition, secondary containment integrity will be maintained, in accordance with this Special Operations LCO, and the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing (Reference 1). The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment described in Reference 2. Therefore, these requirements will conservatively limit potential radiation releases to the environment.

Specification 3.7.A.4: Requires the pressure suppression chamber - reactor building vacuum breakers to be operable whenever primary containment integrity is required. Since primary containment integrity is not required to be maintained during hydrostatic and system leakage testing of the reactor coolant system, the safety function provided by the vacuum breakers is not required.

Specification 3.7.A.5: Requires the pressure suppression chamber - drywell vacuum breakers to be operable whenever primary containment integrity is required. Since primary containment integrity is not required to be maintained during hydrostatic and system leakage testing of the reactor coolant system, the safety function provided by the vacuum breakers is not required.

Specification 3.7.D.1 Requires that primary containment isolation valves and all instrument excess flow check valves be operable whenever primary containment integrity is required. Primary containment integrity will not be required per Specification 3.7.A.2; therefore, the safety function provided by Specification 3.7.D.1 is not required.

Specification 3.9: Includes operability requirements for the Normal and Reserve AC Power Systems, Emergency AC Power System, Station Batteries, and LPCI MOV Independent Power Supplies. This specification does not specifically address operability requirements for power systems other than Emergency Diesel Generators during Cold Shutdown. In order to assure adequate power sources are available during reactor coolant system pressure testing, proposed Specification 3.12.A requires that necessary power supply systems be operable to support equipment required to be operable. This proposed change is consistent with the requirements of Standard Technical Specifications (Reference 3) for shutdown power sources. Since Specification 3.12.A will ensure adequate power source availability, the safety function provided by Specification 3.9 is not required.

Specification 3.11.A: Requires the control room emergency ventilation air supply fans and fresh air filter trains be operable whenever reactor coolant temperature is above 212°F. The purpose of the control room emergency ventilation system is to supply clean air for breathing and to maintain a positive pressure in the control room in the event of a LOCA or other design basis accidents. During reactor coolant system pressure testing, the reactor will be maintained subcritical, there is minimal potential for fuel failure, and secondary containment integrity will be maintained. Therefore, the safety function provided by specification 3.11.A is not required.

Specification 3.11.B: Requires crescent area cooling and ventilation equipment be operable whenever Specifications 3.5.A, 3.5.B, and 3.5.C are required to be satisfied. Since the reactor will be considered to be in Cold Shutdown during reactor coolant pressure testing, Specifications 3.5.A, 3.5.B, and 3.5.C will not be applicable and thus crescent area ventilation and cooling equipment will not be required to be operable. During reactor coolant system pressure testing, the reactor will be subcritical, at low decay heat values, and near Cold Shutdown conditions; therefore, the safety function provided by Specification 3.11.B is not required.

Comparison With Standard Technical Specifications

These proposed changes, with minor exceptions, adopt Special Operations Section 3.10.1, "Inservice Leak and Hydrostatic Testing Operation," from Standard Technical Specifications (Reference 3). The differences between proposed Specification 3.12.A and Standard Technical Specification (STS) Section 3.10.1 and the basis for the differences are discussed below.

- STS provide an exception to normal Hot Shutdown requirements by modifying the definition of Mode. Proposed Specification 3.12.A provides an exception in terms of reactor coolant temperature. This difference is required because FitzPatrick TS typically define system operability requirements in terms of reactor coolant temperature.

- STS provide an exception to the requirements of LCO 3.4.9, "Residual Heat Removal (RHR) Shutdown Cooling System - Cold Shutdown." This exception is not included in proposed Specification 3.12.A because FitzPatrick Technical Specifications do not address shutdown cooling system operability requirements.

- STS do not place an upper limit on reactor coolant temperature during reactor coolant system pressure testing. Proposed Specification 3.12.A limits reactor coolant temperature to 300°F. This is more conservative than STS and provides an additional margin of safety by limiting the stored energy in the reactor coolant system. The 300°F limit is consistent with current FitzPatrick Technical Specification requirements for reactor coolant system pressure testing.

- STS require that certain functions of LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," be operable during reactor coolant system pressure testing. Proposed Specification 3.12.A does not specifically mention the subject instrumentation because operability of instrumentation is implicit by the requirement to establish secondary containment integrity, including standby gas treatment system operability.

- STS require that LCO 3.6.4.2, "Secondary Containment Isolation Valves," be met during reactor coolant system pressure testing. Proposed Specification 3.12.A does not mention the subject valves because FitzPatrick Technical Specifications do not specifically address operability of secondary containment isolation valves. Isolation valve operability is implicit by the requirement to establish secondary containment integrity.

- Proposed Specification 3.12.A includes the requirement to have a minimum of two low pressure emergency core cooling systems (ECCS) operable during reactor coolant system pressure testing. FitzPatrick TS Section 3.5.F.1 requires only one low pressure ECCS be operable during Cold Shutdown, provided that no work is being performed with the potential for draining the reactor vessel. STS Section 3.5.2 requires two low pressure ECCS be operable at all times during Cold Shutdown. Therefore, proposed Specification 3.12.A ensures the same ECCS redundancy afforded by STS during pressure testing.

- Proposed Specification 3.12.A includes the requirement to have the necessary power supply systems operable to support equipment required to be operable during reactor coolant system pressure testing. FitzPatrick TS Section 3.9 addresses only emergency diesel generator operability during Cold Shutdown. STS Section 3.8 addresses operability of all power supply systems during Cold Shutdown. Therefore, proposed Specification 3.12.A ensures the same power supply system redundancy afforded by STS during pressure testing.

2. Editorial Changes

Editorial changes do not alter the intent of any operability or surveillance requirements contained in the TS. Therefore, these changes have no effect on safety.

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 probability of a leak in the reactor coolant pressure boundary during reactor coolant system pressure testing is not increased by considering the reactor to be in Cold Shutdown. Since the pressure tests are performed nearly water solid, at low decay heat values, and near Cold Shutdown conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized. In addition, secondary containment integrity will be maintained, in accordance with the Special Operations LCO, and the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment. In the event of a large primary system leak, the reactor vessel would rapidly depressurize, allowing the low pressure core cooling systems to operate. The capability of these systems would be adequate to keep the core flooded under this low decay heat load condition. Small system leaks would be detected by leakage inspections before significant inventory loss occurred. Therefore, the consequences of an accident previously evaluated are not significantly increased.

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

   The proposed changes do not introduce any new accident initiators or failure mechanisms since the changes do not involve any changes to structures, systems, or components, do not involve any change to the operation of systems, and alter procedures only to the extent that the 212°F limit may be exceeded during reactor coolant system pressure testing with certain systems inoperable. There are no alterations to plant systems designed to mitigate the consequences of accidents. The only difference is that a different subset of plant systems would be utilized for accident mitigation than those utilized during the Hot Shutdown Mode. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from those previously evaluated.

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

   Since pressure tests are performed nearly water solid, at low decay heat values, and near Cold Shutdown conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized. Since secondary containment integrity will be maintained, in accordance with the Special Operations LCO, the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

V. IMPLEMENTATION OF THE PROPOSED CHANGES

Implementation of the proposed changes will not adversely affect the ALARA or Fire Protection Programs at the FitzPatrick plant, nor will the changes impact the environment.

VI. CONCLUSION

Based on the discussion above, the reactor may be safely considered to be in the Cold Shutdown Mode during reactor coolant system pressure tests, with reactor coolant temperature between 212°F and 300°F.

The Plant Operating Review Committee (PORC) and Safety Review Committee (SRC) have reviewed this proposed change to the Technical Specifications and have concluded that it does not involve an unreviewed safety question or a significant hazards consideration and will not endanger the health and safety of the public.

VII. REFERENCES

1. JAF-CALC-MULT-02238, Revision 0, JAF-HELB Analysis During Hydrostatic Test
2. James A. FitzPatrick Updated Final Safety Analysis Report, Section 14
3. NUREG-1433, "Standard Technical Specifications for General Electric Boiling Water Reactors (BWR/4)," Revision 1, dated April 1995
4. James A. FitzPatrick Technical Specifications, Sections 3.2.A, 3.2.H, 3.5.A, 3.5.B, 3.6.C, 3.6.D, 3.6.I, 3.7.A, 3.7.D, 3.9, and 3.11
5. AEC Safety Evaluation of the James A. FitzPatrick Nuclear Power Plant, Docket No. 50-333, Dated November 20, 1972, and Supplements
6. NRC letter, B. C. McCabe to R. E. Beedle, dated March 9, 1992, issuing Amendment 179 to the Technical Specifications
7. NYPA letter (JPN-92-002) R. E. Beedle to NRC, dated January 9, 1992, regarding "Proposed Changes to the Technical Specifications Reactor Vessel Hydrostatic Testing (JPTS-91-014)"

Attachment III to JPN-96-005

MARKED-UP TECHNICAL SPECIFICATION PAGES

INSERVICE LEAK AND HYDROSTATIC TESTING OPERATION

(JPTS-95-004)

New York Power Authority

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

Insert

A "G. Special Operations LCOs in Section 3.12 allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with the Special Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations LCO shall be met. When a Special Operations LCO is not desired to be met, entry into an OPERATIONAL CONDITION (mode) or other specified condition shall only be made in accordance with the other applicable specifications."

B "G. Special Operations LCOs in Section 3.12 allow specified TS requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the OPERATIONAL CONDITION (mode) or other specified condition not directly associated with or required to be changed to perform the special test or operation will remain in effect.

The applicability of a Special Operations LCO represents a condition not necessarily in compliance with the normal requirements of TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operations LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operations LCO, the requirements of the Special Operations LCO shall be followed. When a Special Operations LCO requires another LCO to be met, only the requirements of the LCO statement are required to be met (i.e., should the requirements of this other LCO not be met, the ACTIONS of the Special Operations LCO apply, not the ACTIONS of the other LCO). However, there are instances where the Special Operations LCO ACTIONS may direct the other LCOs' ACTIONS be met.

Surveillances of the other LCO are not required to be met, unless specified in the Special Operations LCO. If conditions exist such that the Applicability of any other LCO is met, all the other LCOs' requirements (ACTIONS and SR) are required to be met concurrent with the requirements of the Special Operations LCO."

Insert

C "3.12 LIMITING CONDITIONS FOR OPERATION

3.12 SPECIAL OPERATIONS

Applicability:

Applies to the status of systems during special operations.

Objective:

To allow performance of special operations.

Specification:

A. Inservice Leak and Hydrostatic Testing Operation

The reactor may be considered to be in COLD SHUTDOWN with reactor coolant temperature between 212°F and 300°F and the reactor vessel not vented, to allow performance of inservice leak or hydrostatic testing provided the following LCOs are met:

1. LCO 3.5.F, "ECCS-Cold Condition," a minimum of two low pressure subsystems shall be operable;

2. LCO 3.7.B, "Standby Gas Treatment System;"

3. LCO 3.7.C, "Secondary Containment;" and

4. LCO 3.9, "Auxiliary Electrical Systems," the necessary systems shall be operable to support equipment required to be operable.

5. With the above requirements not met, immediately suspend activities that could increase reactor coolant temperature or pressure and reduce reactor coolant temperature to less than 212°F within 24 hours."

Insert

D "4.12 SURVEILLANCE REQUIREMENTS

4.12 SPECIAL OPERATIONS

Applicability:

Applies to periodic testing of systems during special operations.

Objective:

To verify operability of required systems during special operations.

Specification:

A. Inservice Leak and Hydrostatic Testing Operation

Perform the applicable surveillance requirements for the required LCOs."

E "A. Inservice Leak and Hydrostatic Testing Operation

The purpose of this Special Operations LCO is to allow certain reactor coolant pressure tests to be performed in COLD SHUTDOWN when the metallurgical characteristics of the reactor pressure vessel (RPV) require the pressure testing at temperatures greater than 212°F (normally corresponding to HOT SHUTDOWN).

Allowing the reactor to be considered in COLD SHUTDOWN during hydrostatic or leak testing, when reactor coolant temperature is >212°F, effectively provides an exception to HOT SHUTDOWN requirements, including operability of primary containment and the full compliment of redundant Emergency Core Cooling Systems. Since the hydrostatic or leak tests are performed nearly water solid, at low decay heat values, and near COLD SHUTDOWN conditions, the stored energy in the reactor core will be low. Under these conditions, the potential for failed fuel and a subsequent increase in coolant activity is minimized. In addition, secondary containment integrity will be maintained, in accordance with this Special Operations LCO, and the secondary containment will be capable of handling any airborne radioactivity or steam leaks that could occur during the performance of hydrostatic or leak testing. The required pressure testing conditions provide adequate assurance that the consequences of a steam leak will be conservatively bounded by the consequences of the postulated main steam line break outside of primary containment.

Insert

E (cont'd) In the event of a large primary system leak, the reactor vessel would rapidly depressurize, allowing the low pressure core cooling systems to operate. The capability of these systems, as required by this Special Operations LCO, would be adequate to keep the core flooded under this low decay heat load condition. Small system leaks would be detected by leakage inspections before significant inventory loss occurred.

For the purposes of this test, the protection provided by normally required COLD SHUTDOWN applicable LCOs, in addition to the requirements of this Special Operations LCO, will ensure acceptable consequences during normal hydrostatic test conditions and during postulated accident conditions."

TECHNICAL SPECIFICATIONS

TABLE OF CONTENTS

MOVE

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delete

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Add

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS	
3.12 Special Operations	4.12	244a
A. Inservice Leak and Hydrostatic Testing Operation	A.	244a

3.0 Continued

4.0 Continued

Insert "A"

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.

Delete

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.

Delete

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.

Delete

delete

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.

Insert "B"

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.

delete

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.

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.

~~83, 188, 198, 227,~~ delete

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.

delete

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

delete

3.5 (cont'd)

a. From and after the date that the HPCI System is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding 7 days unless such system is sooner made operable, provided that during such 7 days all active components of the Automatic Depressurization System, the Core Spray System, LPCI System, and Reactor Core Isolation Cooling System are operable.

b. If the requirements of 3.5.C.1 cannot be met, the reactor shall be placed in the cold condition and pressure less than 150 psig within 24 hrs.

2. 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.C.1 above.

Delete

3. The HPCI 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)

a. When it is determined that the HPCI ~~subsystem~~ is inoperable the RCIC, the LPCI subsystem, both core spray subsystems, and the ADS ~~subsystem~~ actuation logic shall be verified to be operable immediately. The RCIC system and ADS ~~subsystem~~ logic shall be verified to be operable daily thereafter.

both

Amendment No. 1, 107, 144, 148, ~~179~~,

3.5 (cont'd)

2. If the requirements of 3.5.D.1 cannot be met, the reactor shall be placed in the cold condition and pressure less than 100 psig within 24 hr.

3. Low power physics testing and reactor operator training shall be permitted with inoperable ADS components, provided that reactor coolant temperature is ≤212 °F and the reactor vessel is vented or reactor vessel head is removed.

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

4.5 (cont'd)

2. A logic system functional test.

a. When it is determined that two valves of the ADS are inoperable, the ADS ~~subsystem~~ actuation logic for the operable ADS valves and the HPCI ~~subsystem~~ shall be verified to be operable immediately and at least weekly thereafter.

b. When it is determined that more than two relief/safety valves of the ADS are inoperable, the HPCI System shall be verified to be operable immediately.

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.

delete

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.	Pump Operability	Once/month
c.	Motor Operated Valve Operability	Once/month
d.	Flow Rate	Once/3 months
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 31 days.
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~~,

3.6 (cont'd)

4.6 (cont'd)

a. ≤20°F when to the left of curve C.

b. ≤100°F when on or to the right of curve C.

delete

Specifications 3.5.C, 3.5.D, 3.5.E and 3.6.E which would become effective because of an increase in reactor coolant temperature above 212°F or pressures above 100 and 150 psig are not required while conducting the RCS hydrostatic pressure and leakage tests between 212°F and 300°F provided all control rods are fully inserted.

3. Non-Nuclear Heatup and Cooldown

During heatup by non-nuclear means (mechanical), cooldown following nuclear shutdown and low power physics tests the Reactor Coolant System pressure and temperature shall be on or to the right of the curve B shown in Figure 3.6-1 Part 1, 2, or 3 and the maximum temperature change during any one hour shall be ≤100°F.

3. Non-Nuclear Heatup and Cooldown

During heatup by Non-Nuclear means, cooldown following nuclear shutdown and low power physics tests, the reactor coolant system pressure and temperature shall be recorded every 30 minutes until two consecutive temperature readings are within 5°F of each other.

4. Core Critical Operation

During all modes of operation with a critical core (except for low power physics tests) the reactor Coolant System pressure and temperature shall be at or to the right of the curve C shown in Figure 3.6-1 Part 1, 2, or 3 and the maximum temperature change during any one hour shall be ≤100°F.

4. Core Critical Operation

During all modes of operation with a critical core (except for low power physics tests) the reactor Coolant System pressure and temperature shall be recorded within 30 minutes prior to withdrawal of control rods to bring the reactor critical and every 30 minutes during heatup until two consecutive temperature readings are within 5°F of each other.

delete (1)

3.6 (cont'd)

2. If Specification 3.6.E.1 is not met, the reactor shall be placed in a cold condition within 24 hours.

3. Low power physics testing and reactor operator training shall be permitted with inoperable components as specified in Specification 3.6.E.1 above, provided that reactor coolant temperature is $\leq$ 212 F and the reactor vessel is vented or the reactor vessel head is removed.

4. The provisions of Specification 3.0.D are not applicable.

delete

5. The safety and safety/relief valves are 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.

4.6 (cont'd)

del

2. At least one safety/relief valve shall be disassembled and inspected every 24 months.

3. The integrity of the nitrogen system and components which provide manual and ADS actuation of the safety/relief valves shall be demonstrated at least once every 3 months.

4. Manually open each safety/relief valve while bypassing steam to the condenser and observe a $\geq$ 10% closure of the turbine bypass valves, to verify that the safety/relief valve has opened. This test shall be performed at least every 24 months while in the RUN mode and within the first 12 hours after steam pressure and flow are adequate to perform the test.

del

del

3.6 and 4.6 BASES (cont'd)

Fig. 3.6-1, curve B, provides limitations for plant heatup and cooldown when the reactor is not critical or during low power physics tests. The thermal limitation is based on maximum heatup and cooldown rates of 100°F/hr in any one-hour period.

Fig. 3.6-1, curve C, establishes operating limits when core is critical. These limits include a margin of 40°F as required by 10 CFR 50 Appendix G.

The requirements for cold boltup of the reactor vessel closure are based on NDT temperature plus a 60°F factor of safety. This factor is based on the requirements of the ASME Code to which the vessel was built. For Fig. 3.6-1, curves A, B and C, margins are only added to the low temperature portion of the curve where non-ductile failure is a concern. The closure flanges have an NDT temperature not greater than 30°F and are not subject to any appreciable neutron radiation exposure. Therefore, the minimum temperature of the flanges when the studs are in tension is 30°F plus 60°F, or 90°F.

delete

Specification 3.6.A.2 identifies four LCOs that become effective with increased reactor coolant temperature or pressure but are not in effect during the hydrostatic and leakage tests. This is necessary because, as reactor fluence increases, the minimum test temperature and pressure rises into ranges normally associated with startup or hot shutdown. RCS pressure and temperature are used throughout the Technical Specifications as a basis for establishing plant mode and system operability requirements. Some LCOs and restrictions cannot be satisfied during the test at elevated temperatures. For example, Specifications 3.5.C.1 and 3.5.E.1 require that HPCI and RCIC be

delete

operable when reactor pressure exceeds 150 psig and 212°F HPCI and RCIC cannot be made operable during the test because piping normally filled with steam is filled with water during the test.

Hydrostatic and leakage tests shall be terminated before the reactor coolant temperature exceeds 300°F. This temperature limit is based on providing a 50°F band for operating flexibility between the 300°F limit and the highest estimated minimum testing temperature at 32 EFPY (approximately 250°F).

The protection provided by LCOs applicable during cold shutdown plus the requirement that all control rods be fully inserted are adequate to ensure protection of public health and safety. The hydrostatic test is performed once every 10 years while the leakage test is performed after each refueling when conditions are similar to cold shutdown (i.e., after the reactor has been shutdown and decay heat and the energy stored in the core is very low). The consequences of accidents (small and large break LOCAs, MSLB, etc.) are bounded by analyses that assume full power operation. Specification 3.5.A requires the low pressure ECCS systems to be operable. Specifications 3.7.A, 3.7.B and 3.7.C require the containment, SGTS and secondary containment to be operable. Specifications 3.2.A, 3.2.B and Appendix B, Specification 3.8 require instrumentation that initiate containment, low pressure ECCS, SBGT and secondary containment be operable. Emergency power is required by Specification 3.9.B.

Amendment No. 93, 113, ~~179~~

Insert "C"

Insert "D"

delete

Pages 244a - 244w DELETED

JAFNPP

3.12 and 4.12 BASES

Insert "E"

Amendment No.