TABLE OF CONTENTS (Cont'd)

DFO4

TABLE OF CONTENTS (Cont'd)

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

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

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

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

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

3.0 Bases - 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.

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 $\leq 212°F$ 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 System, 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 per 24 Months
b.	Verify that each valve (manual, power operated or automatic) in the system flowpath that is not locked, sealed or otherwise secured in position, is in the correct position.	Once per 31 Days
c.	Motor Operated Valve Operability	Once per 92 Days

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

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.

4.6 (cont'd)

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 or 2 for the flange, upper vessel and beltline regions, and on or to the right of curve B_{BH} for the bottom head region. 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 or 2. 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.

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 ≤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 ≥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, curves B and B_{BH}, provide 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 region are established based on RT_{NDT} plus 60°F. This factor is based on the original requirements of the ASME Code to which the vessel was built, as well as additional, conservative requiremements developed by General Electric that are typically applied to most BWRs. For Fig. 3.6-1, curves A, B, and C, this factor leads to the 90°F lower temperature limit. This limit is based on the closure flange materials maximum RT_{NDT} of 30°F, and the fact that the closure flange materials are not subjected to any appreciable neutron radiation exposure. Therefore, the minimum temperature for cold boltup 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 system (RCS) temperature between 212°F and 300°F, the reactor vessel not vented, and LCO requirements normally applicable when RCS temperature is greater than 212°F are not required, 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. Secondary Containment isolation and Standby Gas Treatment initiation instrumentation:

   a. LCO 3.2.A, "Primary Containment Isolation Functions", Table 3.2-1, Trip Function "Reactor Low Water Level (Notes 4 and 7)";

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 LIMITING CONDITIONS FOR OPERATION

3.12 SPECIAL OPERATIONS (cont.)

b. Radiological Effluent TS LCO 3.8, "Standby Gas Treatment System", Radiological Effluent TS Table 3.10-1, Trip Functions "Refuel Area Exhaust Monitor" and "Reactor Building Area Exhaust Monitors".

4. LCO 3.7.C, "Secondary Containment"; (including the maintenance of Secondary Containment Integrity as defined by Definition 1.0.S); and

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

6. 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.

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 system (RCS) 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, and not requiring LCO requirements normally applicable when RCS temperature is greater than 212°F to be met, effectively provides an exception to HOT SHUTDOWN Mode (or other LCO Applicability statements that address plant conditions other than the REFUEL or COLD SHUTDOWN Mode) requirements, including operability of primary containment and the full complement of redundant Emergency Core Cooling Systems. For example, the requirements of 3.5.E (RCIC) and 3.6.D (Coolant Leakage) are not applicable during operations under 3.12.A even though RCS temperature might be >212°F. 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, Special Operations LCO 3.12.A requires supporting LCOs for ECCS-Cold Condition, Standby Gas Treatment, Secondary Containment isolation and Standby Gas Treatment initiation instrumentation, and Auxiliary Electrical Systems to be met to ensure secondary containment integrity is maintained and 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.