Docket No. 50-245
B12626

Attachment 1

Millstone Nuclear Power Station, Unit No. 1

Proposed Revision to Technical Specifications
Feedwater Coolant Injection Subsystems

August, 1987

LIMITING CONDITION FOR OPERATION

3.5 CORE AND CONTAINMENT COOLING SYSTEMS

C. FWCI Subsystem

1. Except as specified in 3.5.C.3 below, the FWCI subsystem shall be operable whenever the reactor coolant temperature is greater than 330°F and irradiated fuel is in the reactor vessel.

2. There shall be a minimum of 250,000 gallons of useable water in the condensate storage tank for operation of the FWCI.

3. From and after the date that the FWCI subsystem is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days, unless such subsystem is sooner made operable, provided that during such seven days all active components of the Automatic Pressure Relief Subsystem, the core spray subsystems, LPCI subsystem, and isolation condenser system are operable.

4. If the requirements of 3.5.C cannot be met, an orderly shutdown shall be initiated and the reactor coolant temperature shall be less than 330°F within 24 hours.

SURVEILLANCE REQUIREMENT

4.5 CORE AND CONTAINMENT COOLING SYSTEMS

C. Surveillance of FWCI Subsystems shall be performed as follows:

1.

	Item	Frequency
a.	Pump and valve operability	Per Surveillance Requirement 4.13
b.	Simulated Automatic Actuation Test	Every refueling outage

2. Once a week the quantity of water in the condensate storage tank shall be logged.

The FWCI utilizes portions of the normally operating feedwater system; e.g., condensate, condensate booster and feedwater pumps. Therefore, the reliability of the pumps, valves and motors is constantly being demonstrated. Thus the system has an inherently higher degree of reliability than normally non-operating systems. Since an operating string of pump and valves is programmed for FWCI operation, it is not expected that the normally operating portions of the FWCI would be out of operation during normal operation.

The minimum inventory in the CST is sufficient to permit cooldown to cold shutdown conditions following the worst case reactor building fire. This quantity of CST water is sufficient to account for 10 hours of decay heat removal via FWCI/SRV operation, and to compensate for primary coolant leakage and shrinkage during cooldown to cold shutdown conditions. The 10-hour time frame allows for equipment repairs to restore isolation condenser operability for the worst case reactor building fire.

D. Automatic Pressure Relief (APR) Systems

The relief valves of the automatic pressure relief subsystem are a backup to the FWCI subsystem. They enable the core spray or LPCI to provide protection against the small pipe break in the event of FWCI failure, by depressurizing the reactor vessel rapidly enough to actuate the core sprays or LPCI. The core spray and/or LPCI provide sufficient flow of coolant to limit fuel clad temperature to well below clad melt to assure that core geometry remains intact.

APR testing at low reactor pressure is required during each operating cycle. It has been demonstrated that the blowdown of the APR to the torus causes a wave action that is detectable on the torus water level instrumentation. The discharge of a relief line is audible to an individual located outside the torus in the vicinity of the line, as experienced at other BWRs.

E. Isolation Condenser System

The turbine main condenser is normally available. The isolation condenser is provided for core decay heat removal following reactor isolation and scram. The isolation condenser has a heat removal capacity sufficient to handle the decay heat production at 300 seconds following a scram. Water will be lost from the reactor vessel through the relief valves in the 300 seconds following isolation and scram. This represents a minor loss relative to the vessel inventory.

The system may be manually initiated at any time. The system is automatically initiated on high reactor pressure in excess of 1085 psig