



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

May 11, 1999

Mr. Oliver D. Kingsley, President  
Nuclear Generation Group  
Commonwealth Edison Company  
Executive Towers West III  
1400 Opus Place, Suite 500  
Downers Grove, IL 60515

SUBJECT: TECHNICAL SPECIFICATION BASES CHANGE - QUAD CITIES NUCLEAR  
POWER STATION, UNITS 1 AND 2 (TAC NOS. MA5191 AND MA5192)

Dear Mr. Kingsley:

By letter dated April 5, 1999, Commonwealth Edison Company (ComEd, the licensee) submitted a change to Facility Operating License Nos. DPR-29 and DPR-30, Appendix A - Technical Specifications (TS) Bases Section 3/4.5.A, "Emergency Core Cooling System - Operating." The licensee made a change to this bases section to provide clarity and incorporate a changed commitment referenced in a ComEd letter dated November 25, 1998.

By letter dated July 28, 1995, ComEd responded to a request for additional information providing information regarding a TS change in Section 3/4.5.A concerning actions to be taken upon failure of the low and high pressure flow test for High Pressure Coolant Injection (HPCI) Surveillance Requirements (TS sections 4.5.A.2.c and 4.5.A.2.b.1) during startup. In this letter, ComEd committed to declare HPCI inoperable and the reactor will be less than 150 psig in 24 hours if the low pressure flow test requirements for startup can not be met. These TS sections refer to footnote (c) which imposes TS 4.0.D which does not allow entry into an operational mode or other specified condition without completing the required surveillances. In response to this commitment the staff issued a safety evaluation report dated December 27, 1995, which accepted the TS change based on that commitment.

The April 5, 1999, letter changes the commitment by adding a statement in Bases section 3/4.5.A. This statement says; "Should either the high pressure or low pressure flow test fail, Technical Specification 3.5.A, Action 3 is applied." Action 3 allows a 14-day outage time when certain conditions are met. This change in commitment and addition to Bases Section 3/4.5.A did not require a TS change. This action is consistent with TS 3.0.A which requires that action statements be met upon failure to meet a Limiting Condition for Operation which for this instance would be the failure of the HPCI flow test resulting in HPCI being inoperable. Footnote (c) will remain applicable in that when the flow test is not met within 12 hours after reactor steam pressure is adequate to perform the test, TS 4.0.D would still preclude entry into an operational mode or other specified condition unless applicable Surveillance Requirements have been met.

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O. Kingsley

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ComEd has performed this change pursuant to 10 CFR 50.59. This change provides clarity to Bases Section 3/4.5.A and is consistent with the improved Standard Technical Specifications (NUREG-1433). The staff has no objection to this Bases change. Revised TS page B3/4.5-2 is enclosed.

Sincerely,

Original Signed By

Robert M. Pulsifer, Project Manager, Section 2  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-254 and 50-265

Enclosure: Page B 3/4.5-2

cc w/encl: See next page

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**BASES**

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With the HPCI system inoperable, adequate core cooling is assured by the OPERABILITY of the redundant and diversified Automatic Depressurization System and both the CS system and LPCI subsystem. In addition, the Reactor Core Isolation Cooling (RCIC) system, a system for which no credit is taken in the safety analysis, will automatically initiate on a reactor low water level condition. The HPCI out-of-service period of 14 days is based on the demonstrated OPERABILITY of redundant and diversified low pressure core cooling systems and the RCIC system.

The surveillance requirements provide adequate assurance that the HPCI system will be OPERABLE when required. Should either the high pressure or low pressure flow test fail, Technical Specifications 3.5.A, Action 3 is applied. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete system functional test requires a reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to provide cooling at the earliest moment.

Upon failure of the HPCI system to function properly after a small break loss-of-coolant, the Automatic Depressurization System (ADS) automatically causes all OPERABLE main steamline relief valves to open, depressurizing the reactor so that flow from the low pressure core cooling systems can enter the core in time to limit fuel cladding temperature to less than 2200°F. ADS is conservatively required to be OPERABLE whenever reactor vessel pressure exceeds 150 psig. This pressure is substantially below that for which the low pressure core cooling systems can provide adequate core cooling for events requiring ADS.

ADS automatically controls the five main steamline relief valves although the safety analyses support a minimum of 4 OPERABLE valves. It is therefore appropriate to permit one valve to be out-of-service for up to 14 days without materially reducing system reliability. A manual actuation of each ADS valve is performed to verify that the valve and solenoid are functioning properly and that no blockage exists in the ADS discharge lines. This is demonstrated by the response of the turbine control or bypass valve or by a change in the measured steam flow or by any other method suitable to verify steam flow. Adequate reactor steam dome pressure must be available to perform this test to avoid damaging the valve. Sufficient time is therefore allowed after the required pressure is achieved to perform this test once only. The pressure specified for this test is that pressure recommended by the valve manufacturer. Reactor startup is allowed prior to performing this test because valve OPERABILITY and the setpoints for overpressure protection are verified, per ASME requirements, prior to valve installation. Thus, a footnote is included in this SR to indicate that 4.0.D does not apply.

To preserve single failure criteria, a minimum of two independent OPERABLE low-pressure ECCS subsystems/loops are required in OPERATIONAL MODE(s) 4 and 5 to ensure adequate vessel inventory makeup in the event of an inadvertent vessel draindown. Only a single LPCI pump is required per loop because of the large injection capacity. All of the ECCS may be inoperable provided the reactor head is removed, the reactor cavity is flooded, the spent fuel gates are removed, and the water level is maintained within the limits required by the Refueling Operations specifications.