



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 78 TO FACILITY OPERATING LICENSE NO. DPR-6

CONSUMERS POWER COMPANY

BIG ROCK POINT PLANT

DOCKET NO. 50-155

1.0 INTRODUCTION

By generic letter dated April 10, 1980, all power reactor licensees were requested by the NRC to propose certain Technical Specification (TS) changes to resolve Multi-Plant Action D-17. These changes would incorporate the standard definition of operability and limiting conditions for operation (LCO) which require safety systems relied upon in the safety analysis report to be operable and specify required actions in the event systems or components become inoperable.

By letters dated May 31, 1983, and June 1, 1983, Consumers Power Company (the licensee) responded to the generic letter for Big Rock Point. The licensee indicated that the TS (1) do not include a definition of operability and (2) do include appropriate LCO for the containment spray, core spray, reactor depressurization, and emergency power systems. The licensee further indicated that plant procedures do include an appropriate definition of equipment operability.

As part of the Systematic Evaluation Program the NRC determined in the Big Rock Point Integrated Plant Safety Assessment (NUREG-0828) that the licensee should include a formal definition of operability in the TS. The staff also concluded that the Big Rock Point TS should include appropriate LCO if both trains of redundant safety systems were inoperable.

In response to NUREG-0828, Consumers Power Company submitted proposed TS on November 14, 1984, as revised on January 17, 1985, which incorporate a formal definition of "operability" into the Big Rock Point TS. The request also incorporates LCO for safety systems. These systems include containment ventilation isolation valves and vacuum breakers, emergency condenser system, core spray system, reactor depressurization system, and the containment spray system.

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A Notice of Consideration of Issuance of Amendment to License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action was published in the Federal Register on May 21, 1985 (50 FR 20974). No public comments or requests for hearing were received.

2.0 EVALUATION

The staff has conducted a review of the proposed changes and additions to the facility TS provided in the licensee's submittal dated November 14, 1984 (as revised). The evaluation performed for each change and addition has been provided below.

2.1 New Section 1.2.8

The new TS Section 1.2.8 adds to the existing TS, a definition of operable - operability. This definition is consistent with the Standard Technical Specifications (STS) for Boiling Water Reactors with one exception. The word "safety" has been proposed to be added to the STS definition. The proposed definition states that a system is operable if it is capable of performing its "safety" function. Since the definition applies only to safety systems at the Big Rock Point Plant, this difference is inconsequential. Thus, the staff finds the proposed TS to be acceptable.

2.2 Section 3.4.2(f)

Section 3.4 of the facility TS establishes the requirements for the containment sphere penetrations. Section 3.4.2, in particular, describes the methods of closure of these penetrations and the redundancy established to ensure containment integrity. Section 3.4.2(f) describes the containment sphere ventilation penetration requirements. As described, two 24-inch ventilation openings, one for supply and one for exhaust, currently exist at the facility. The TS for valve closure time and isolation signal sources are not affected by this proposed TS change.

To ensure containment integrity in the case of a single failure of a ventilation valve, two valves (in series) exist in the ventilation supply line and two valves exist in the ventilation exhaust line ensuring containment isolation.

Current TS also provide for the possibility of excessive external pressure on the containment sphere due to atmospheric changes. In order to prevent this possibility, TS currently require the two valves in the ventilation supply line to automatically open whenever the differential pressure exceeds 1 psi, overriding all other signals. Current TS, however, do not include similar requirements for the two ventilation exhaust valves. The proposed change will add to the TS the requirement for the two ventilation exhaust valves to function similarly. Since either of the two valves in the ventilation supply line failing to automatically open will prohibit containment sphere vacuum relief, the ventilation exhaust path becomes the redundant method. Therefore, the staff finds these changes to be acceptable.

2.3 New Section 3.4.3(d)

Section 3.4.3, Operating Requirements for Penetrations, does not currently include LCO. New Section 3.4.3(d) adds the LCO for the vacuum relief paths discussed in 2.2 above. The proposed LCO forces the plant to be taken to a shutdown condition within 12 hours and to the cold shutdown condition within the following 24 hours, if both vacuum relief paths become inoperable. A comparison between the proposed LCO and STS LCO for similar equipment reveals these TS LCO are consistent with STS LCO, are appropriate for the Big Rock Point Plant and are therefore, found to be acceptable.

2.4 Section 3.6

TS Containment Requirements currently existing do not contain LCO. The proposed change to Section 3.6 will add to the existing TS appropriate LCO. These LCO, when compared to STS LCO for containment integrity, are consistent with the STS. These TS changes are appropriate for the Big Rock Point Plant and are therefore found to be acceptable.

2.5 Section 4.1.2(b)

TS currently existing for the emergency condenser loops do not contain LCO. The proposed TS change would insert appropriate LCO for this equipment. Since LCO are currently nonexistent, and since the new LCO are consistent with all of the other safety system LCO, we find this change to be acceptable.

2.6 Sections 11.3.1.4, 3.1.5, and 11.3.3.4

The current TS for Emergency Core Cooling System, Reactor Depressurization System, and Containment Spray System, as delineated in the above Section numbers, do not contain LCO. The proposed TS changes would add identical LCO for all cases in which both safety trains become inoperable. The proposed LCO are consistent with STS LCO for equivalent systems, are appropriate for the Big Rock Point Plant, and are therefore, found to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ACKNOWLEDGMENT

This evaluation was prepared by T. Rotella and R. Dudley.

Dated: October 2, 1985.