



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NO. NPF-62
ILLINOIS POWER COMPANY, ET AL.
CLINTON POWER STATION, UNIT NO. 1
DOCKET NO. 50-461

1.0 INTRODUCTION

By letter dated December 17, 1990 and supplemented December 17, 1991, Illinois Power Company requested changes to the Clinton Technical Specification (TS) Section 3.4.3.4.1, Anticipated Transient Without Scram Recirculation Pump Trip (ATWS-RPT) system instrumentation to comply with the requirements of 10 CFR 50.62. The actuation logic for the Clinton ATWS-RPT is based on a trip system with two-out-of-two high reactor pressure signals or two-out-of-two low-low reactor water level signals. These are redundant trip systems. Each trip system will automatically trip both pumps. TS 3.3.4.1 requires both reactor pressure channels and both reactor water level channels in each trip system to be operable while in Operational Condition (Run Mode). Action (b) of TS 3.3.4.1 currently allows one channel in one trip system to be inoperable for up to 48 hours; otherwise, the plant must be in at least Operational Condition 2 (Startup Mode) within the next 6 hours.

The licensee proposed to replace the existing Action statement (b) with a new action statement and add new Action statements (c) and (d) that are consistent with other BWR/6 plants. In addition, the licensee requested an exemption from the provision of TS 3.0.4. This exemption will allow plant startup with one or more channels inoperable in the RPT system.

2.0 EVALUATION

The existing TS 3.3.4.1 Action statement (b) states that "With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip function in a Trip System, restore the inoperable channel to OPERABLE status within 48 hours or be in at least STARTUP within the next 6 hours." The licensee proposed to replace the existing Action statement (b) with a new Action statement (b) and add Action Statements (c) and (d), as follows:

- b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place the inoperable channel(s) in the tripped condition within 72 hours or be in at least STARTUP within the next 6 hours. The provisions of TS 3.0.4 are not applicable.

- c. With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, place at least one inoperable channel in the tripped condition within one hour, and place the second inoperable channel in the tripped condition within 72 hours. Otherwise, be in at least STARTUP within the next 6 hours. The provisions of TS 3.0.4 are not applicable.
- d. With both trip systems otherwise inoperable, restore at least one trip system to OPERABLE status within one hour or be in at least STARTUP within the next 6 hours.

The staff recognizes that, with the redundant trip systems arrangement, a channel inoperable in one trip system will not prevent the RPT actuation (i.e., it will not lose RPT function), and it is still safe to operate the plant in RUN mode. With one channel inoperable for one trip system, the proposed 72 hours limit is a reasonable time to repair the inoperable channel and is consistent with the draft BWR standard TS. However, the proposed wording "The provisions of TS 3.0.4 are not applicable" in Action Statement (b) is not acceptable. TS 3.0.4 establishes limitations on a change in OPERATIONAL CONDITIONS when a Limiting Condition for Operation (LCO) is not met. It precludes placing the facility in a higher CONDITION of operation when the requirements for a LCO are not met and continued noncompliance to these conditions would result in a shutdown to comply with the ACTION requirements if a change in CONDITIONS were permitted. The purpose of this TS is to ensure that facility operation is not initiated or that higher CONDITIONS of operation are not entered when corrective action is being taken. This is consistent with the staff position in Generic Letter 87-19. The ATWS recirculation pump trip is an important safety feature and should be fully operational prior to changing plant conditions. The provisions of TS 3.0.4 are applicable to LCO 3.3.4.1 and, by letter dated December 17, 1991, the licensee has withdrawn the original request to change the reference to the provisions of TS 3.0.4.

The proposed Action Statement (c) addresses the condition when the number of OPERABLE channels are one less than required for both trip systems. By placing at least one inoperable channel in the trip condition within 1-hour, the risk of incapability to initiate the ATWS-RPT function is limited to the 1-hour time period. The staff finds that during the 1-hour time period plus the 6-hours for bringing the plant to the STARTUP mode, the probability of failing RPT actuation coincident with an ATWS event is very low. Statement (c) also requires placing the second inoperable channel in the tripped condition within 72 hours. This is the same condition as covered by Action (b). The proposed actions are consistent with the draft BWR standard TS being implemented in the improved Technical Specification program. However, the proposed wording "The provisions of TS 3.0.4 are not applicable" in Action Statement (c) is not acceptable for the same reason as stated above for denying in Action Statement (b). The licensee has also withdrawn this proposed change by letter dated December 17, 1991.

The proposed Action Statement (d) addresses the case in which both trip systems are inoperable for reasons other than addressed by proposed Action Statement (c). In this case, the proposed Action (d) requires at least one trip system to be

restored to operable status within 1-hour. With one trip system restored, continued operation would be governed by proposed Action (b). If one trip system is not restored within 1-hour, the plant must be in at least Startup within the next 6-hours. The proposed Action (d) is justified based on the limited period of time for continued plant operation with both ATWS-RPT trip systems inoperable and the low probability of an event occurring that requires actuation of this system during this short time period. The staff finds the proposed Action (d) acceptable.

The wording change on Footnote (a) of TS Table 3.3.4.1-1 allows one trip system to be placed in an inoperable status for up to two hours for required surveillance when the redundant trip system is operable. The staff finds this acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the appropriate Illinois State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of significant impact has been prepared and published in the Federal Register on May 31, 1991 (57 FR 6747). Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

5.0 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: H. Li
J. Lombardo

Date: July 30, 1992