



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 148 TO FACILITY OPERATING LICENSE NO. DPR-62
CAROLINA POWER & LIGHT COMPANY et al.
BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2
DOCKET NO. 50-324

1.0 INTRODUCTION

By letter dated December 10, 1987, the Carolina Power & Light Company (CP&L), submitted a request for changes to the Brunswick Steam Electric Plant, Unit 2, Technical Specification (TS) Tables 3.3.5.2-1 and 4.3.5.2-1. The proposed amendment would change certain instrument numbers listed in the tables under Item 2, "Reactor Vessel Water Level." Level indicator number B21-LI-R604BX would replace B21-LI-R604AX and level transmitter number B21-LT-N026B would replace B21-LT-N026A.

These TS changes are needed as a result of replacing the actual level transmitter B21-LT-N026A with B21-LT-N026B and changing the designation of level indicator B21-LI-R604AX to B21-LI-R604BX. The associated rerouting of instrument cables reflects a plant modification to comply with 10 CFR Part 50, Appendix R, alternative shutdown capability requirements.

2.0 EVALUATION

The remote shutdown monitoring instrumentation provides sufficient instrumentation on the remote shutdown panel to monitor the status of the reactor and primary containment as well as operation of the reactor core isolation cooling (RCIC) and residual heat removal (RHR) systems. The remote shutdown panel is located in the South area of the Reactor Building. The information provided on the panel is either independent of the main control room instrumentation or is provided with isolation features so that malfunctions or fires in or near the control building will not affect its operation.

Currently, level transmitter loop B21-LT-N026A feeds reactor vessel water level indicator B21-LI-R604AX on the remote shutdown panel (directly), and indicator B21-LI-R604A on the control panel (via the shutdown panel). Level transmitter loop B21-LT-N026B feeds only indicator B21-LI-R604B on the control panel. The cabling for the control panel and the remote shutdown panel are routed through the North area of the Reactor Building in the present configuration. Level transmitters B21-LT-N026A and B21-LT-N026B are located in the North and South areas of the Reactor Building respectively. Water level indication to the control panel, therefore, is obtained by cabling which is routed through the North area of the Reactor Building. Thus, a fire in the

North area could destroy the cabling and thereby eliminate indication of reactor water level to the remote shutdown panel.

The modification reroutes cabling so that level transmitter B21-LT-N026A feeds only indicator B21-LI-R604A in the control room directly. Transmitter B21-LT-N026B would feed control room indicator B21-LI-R604B (via the remote shutdown panel) and also the remote shutdown panel indicator B21-LI-R604BX (formerly called B21-LI-R604AX) directly. In the revised configuration, cabling between transmitter B21-LT-N026B and the remote shutdown panel indicator B21-LI-R604BX would not go through the North area of the reactor building because both the level transmitter and the remote shutdown panel are in the South area of the Reactor Building.

These modifications are being made to address alternate shutdown capability requirements associated with 10 CFR 50, Appendix R. Currently, for a fire in the "North" area of the Reactor Building, indication from these level transmitters on both the remote shutdown panel and in the control room could be lost. The instrument rack where transmitter B21-LT-N026A is located would be destroyed, as would the cabling from both the remote shutdown panel and from transmitter B21-LT-N026B to the control room. Thus, there would be no level indication from transmitters either in the control room or on the remote shutdown panel.

With the proposed configuration, a fire in the North area of the Reactor Building would only disable indication to the control room. Indication to the remote shutdown panel would remain intact. Thus, indication would no longer be necessary in the control room, and the remote shutdown panel would provide the necessary indication. This would allow CP&L to safely shut down the unit using the Alternate Safe Shutdown Procedures; as under most circumstances, a fire in the North area of the Unit 2 Reactor Building would require evacuation of the control room.

Other fire scenarios would not be compromised by the modification. For example, a South area fire would result in indication being lost to the remote shutdown panel but maintained in the control room. In such a case, the control room would remain habitable, and the area near the remote shutdown panel would become unusable. Thus, indication would be required only in the control room and could be maintained with the proposed configuration.

The staff has determined that the amendment request is acceptable and complies with commitments made by the licensee with respect to Appendix R of 10 CFR Part 50.

3.0 ENVIRONMENTAL CONSIDERATIONS

This amendment changes a requirement with respect to installation or use of a facility component 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 off site; and that there should be 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 the amendment.

4.0 CONCLUSION

The Commission made a proposed determination that this amendment involves no significant hazards consideration, which was published in the FEDERAL REGISTER (53 FR 3952) on February 10, 1988, and consulted with the State of North Carolina. No public comments or requests for hearing were received, and the State of North Carolina did not have any comments.

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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: April 7, 1988

AMENDMENT NO. 148 TO FACILITY OPERATING LICENSE NO. DPR-62 - BRUNSWICK, UNIT 2

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