UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 230 TO FACILITY OPERATING LICENSE NO. DPR-59

POWER AUTHORITY OF THE STATE OF NEW YORK

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

1.0 INTRODUCTION

By letter dated May 12, 1995, the Power Authority of the State of New York (the licensee) submitted a request for changes to the James A. FitzPatrick Nuclear Power Plant (FitzPatrick) Technical Specifications (TSs). The requested changes would revise TS Section 4.11.D, Emergency Service Water System, to support the extended operating cycle. The proposed change in test frequency is to every 24 months. These changes are necessary to avoid an extended mid-cycle outage.

The NRC staff has previously reviewed requests for individual plants to modify surveillance intervals to be compatible with a 24-month fuel cycle. Therefore, in a letter dated April 2, 1991, the staff issued Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate 24-Month Fuel Cycle," to provide licensees with generic guidance on preparing such license amendments.

2.0 EVALUATION

The service water system consists of three subsystems: the emergency service water system (ESW), the normal service water system, and the residual heat removal (RHR) service water system. The specific surveillances discussed in this safety evaluation are associated with the ESW system. The other two systems do not require surveillance test extensions to 24 months since there are no TS required once per cycle surveillance tests associated with these systems. The monthly operability test of the RHR service water pumps and associated motor-operated valves (MOVs) in Specification 4.5.B.1.c.1 is not impacted by the amendment request.

The ESW system is a safety-related system providing heat removal for the emergency core cooling system (ECCS) components and other equipment essential to safe reactor shutdown. The system consists of two independent supply loops, each supplied by a 100% capacity, motor driven, vertical turbine pump. Each pump takes suction from a separate location in the screenwell and discharges through independent strainers into separate supply headers. The system also includes five MOVs (two pump discharges, two bypass valves, and

one cross-connect). Each train of the ESW system is required to supply raw water cooling to one train of the following safety related loads:

- Emergency Diesel Generator Jacket Water Heat Exchangers,
- Electric Bay Unit Coolers,
- Cable Tunnel/Switchgear Room Coolers,
- Control Room and Relay Room Air Handling Units, and
- Crescent Area Unit Coolers

Normally, the ESW system is maintained in standby condition and operates automatically in response to an indicated loss of reactor building closed loop cooling water system or upon start of one or more emergency diesel generators.

The longer cycle length requires an extension to the ESW simulated automatic actuation test and logic system functional test. This surveillance test demonstrates that the reactor building closed loop cooling (RBCLC) pump discharge header pressure switches and ESW Lockout Matrix relays will cause ESW pumps to start and RBCLC and ESW MOVs to reposition to an ESW injection lineup. Ten surveillance test results were reviewed from 1987 to 1993. Two problems were noted with contacts on an ESW lockout relay failing to operate. The relay was replaced with a new one and the surveillance frequency was increased to quarterly. After seven consecutive tests were performed satisfactorily, the testing frequency was returned to once per operating cycle.

Extension of this test to 24 months will not adversely affect system performance or reliability because the relays used by this system have proven to be reliable as documented by numerous tests; and, all pumps and valves operated by this system are frequently tested with the plant on-line. Flow rate tests are performed quarterly, pump and MOV operability are checked monthly, instrumentation is checked daily and is calibrated quarterly.

In addition to the surveillance interval extensions for TSs 4.11.D.1.a and 4.11.D.1.f , Specification 4.11.D.1.e has been administratively rearranged to better clarify the requirements for ESW instrumentation check and instrument channel calibration. The "once/3 months" frequency, which appears twice in this Specification, has been aligned with the proper (single) surveillance test. No new or different tests or surveillance intervals are proposed by this administrative clarification.

Based on the discussion above, the ESW surveillance tests can be safely extended to accommodate a 24-month operating cycle.

The assumptions in the Fitzpatrick licensing basis are not invalidated by performing the ESW surveillances at the bounding interval limits (30 months) to accommodate the 24-month operating cycle.

The NRC staff has reviewed the proposed changes to TS Section 4.11.D and has concluded that they are in accordance with GL 91-04 and are therefore acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The 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 and changes surveillance requirements. The NRC 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (60 FR 47623). Accordingly, the 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.

5.0 CONCLUSION

The Commission 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 Contributor: C. E. Carpenter, Jr.

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