



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20565

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 136

TO FACILITY OPERATING LICENSE NO. DPR-61

CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT

DOCKET NO. 50-213

1.0 INTRODUCTION

By letter dated February 28, 1991, the Connecticut Yankee Atomic Power Company (CYAPCO/licensee) submitted a request for the Haddam Neck Plant Technical Specifications (TS). The requested changes would establish periodic operability testing of the steam generator overflow protection system at the Haddam Neck Plant.

2.0 BACKGROUND

In the letter dated September 20, 1989, the NRC staff issued Generic Letter (GL) 89-19, "Request for Action Related to Resolution of Unresolved Safety Issue (USI) A-47." As part of the technical resolution of USI A-47, the NRC concluded all PWRs should provide automatic steam generator (SG) overflow protection and that plant procedures and TS should include provisions to periodically verify the operability of the overflow protection system during reactor power operation. By letters dated March 27 and July 26, 1990, CYAPCO responded to GL 89-19 and committed to submit a license amendment request to add TS to periodically verify the operability of the SG overflow protection system. By letter dated May 29, 1990, the staff acknowledged CYAPCO's responses and stated that with the completion of the TS for SG overflow operability, the staff considers USI A-47 resolved for the Haddam Neck Plant.

3.0 EVALUATION

For the SG overflow concern at the Haddam Neck Plant, the design basis excess feedwater event assumes the initiating event as the feedwater regulating valve failing to the fully open position. The feedwater flow resulting from a fully open regulating valve is terminated by the operator before the affected SG is filled. The operator trips the main feedwater pumps and the reactor following annunciation of the high-high SG water level alarm from the faulted loop. As such, the design basis analysis does not take credit for the automatic feedwater control system.

However, the Haddam Neck Plant does utilize a safety-grade overflow protection system to detect a SG high-water-level condition based on one-out-of-two

initiating logic. The overfill system isolates main feedwater by closing the main feedwater regulating valves. The feedwater regulating valves would close when wide-range SG level exceeds 69 percent.

The proposed changes add the feedwater system isolation function to the TS tables for engineered safety features actuation system (ESFAS) limiting conditions for operation and surveillance requirements. The proposed changes are:

1. Table 3.3-2, ESFAS Instrumentation - adds Item 6.a, Feedwater Isolation-Steam Generator Water Level, with specifications for total number of channels, channels to actuate, minimum channels operable, applicable modes, and an appropriate action statement.
2. Table 3.3-3, ESFAS Instrumentation Setpoints - adds Item 6.a, Feedwater Isolation-Steam Generator Water Level--High, with Specifications for trip setpoint and allowable value.
3. Table 4.3-2, ESFAS Instrumentation Surveillance Requirements - adds Item 6.a, Feedwater Isolation-Steam Generator Water Level--High, with frequencies specified for channel check, channel calibration, analog channel operational test and trip actuating device operational test; also specified is the mode for which the surveillance is required.

As part of their response to GL 89-19, CYAPCO committed to provide TS to establish periodic operability testing of the steam generator overfill protection system. CYAPCO has added the feedwater isolation function to the TS via Tables 3.3-2, 3.3-3, and 4.3-2. These TS will require periodic testing of the overfill system and associated LCO consistent with other ESFAS instrumentation. Adding the feedwater isolation function to the tables for ESFAS operability and surveillance requirements will enhance the reliability of the system. In addition the change constitutes an additional limitation, restriction, or control not presently included in the TS; e.g., a more stringent surveillance requirement.

Based on the above, the staff has determined that the proposed TS changes will have no adverse impact on plant safety and will enhance the current TS by adding operability requirements for the SG overfill protection system. Therefore, the staff concludes that the proposed TS change is acceptable.

#### 4.0 STATE CONSULTATION

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

#### 5.0 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 (56 FR 13661). 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.

#### 6.0 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.

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Date: May 6, 1991