



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 41

TO FACILITY OPERATING LICENSE NO. DPR-21

NORTHEAST NUCLEAR ENERGY COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-245

INTRODUCTION

By letter dated August 17, 1987, Northeast Nuclear Energy Company (the licensee) submitted a request to amend the Operating License, DPR-21, for Millstone Nuclear Power Station, Unit No. 1. Specifically, the request would change the Technical Specifications for the Reactor Protection System (RPS) by (1) changing the turbine stop valve closure scram bypass from less than 45% of turbine steam flow, as measured by the turbine first stage pressure, to 50% of reactor thermal power; (2) change the turbine control valve fast closure scram bypass from a generator output of less than 307 MWe to 50% of reactor thermal power; and (3) change the Average Power Radiation Monitor (APRM) flux scram trip setting from an initial generator power greater than 307 MWe to 50% of reactor thermal power.

EVALUATION

In its August 17, 1987, letter the licensee stated that the scram bypass setpoints were being changed because opening the bypass valves or valving out the high-pressure feedwater heaters during end-of-cycle plant coastdown alters the usual direct relationship between reactor power, turbine first stage pressure and generator output. In addition, spurious scrams which occur more frequently at lower power can be avoided by raising the setpoints. Unlike the bypass setpoints, the change in the APRM flux scram trip setting does not constitute a change in the setpoint, but is being made to add to the clarification and consistency of the TS, in that the units of measurement will be the same as the other scram trip settings.

Because of the proposed change in setpoints to 50% of rated reactor thermal power, the licensee re-evaluated the bounding transients for Millstone 1 (General Electric Analysis MDE-276-1285, "Millstone Nuclear Power Station Unit No. 1 Scram Bypass Setpoint Evaluation," dated December 1985). The licensee's evaluation supported the proposed change to the scram bypass setpoints in that the consequences of design basis accidents were determined to be less severe than those in the current reload analysis and that no safety limits would be challenged.

The staff has reviewed the licensee's request and the evaluation and concludes that impact of the changes are bounded by and do not affect the current design accident analyses, do not introduce any new failure modes, and do not affect any protective barriers or safety limits. In addition the change to the APRM flux scram TS is an acceptable clarification. Therefore, the staff finds the licensee's proposed changes to the TS to be acceptable.

#### ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on December 6, 1989 (54 FR 50460). Accordingly, based upon the environmental assessment, we have determined that the issuance of the amendment will not have a significant effect on the quality of the human environment.

#### CONCLUSION

We have 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 (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.

Dated: December 11, 1989

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