



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. DPR-28

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 Introduction

We have reviewed the licensee's proposed changes to the Vermont Yankee license that were transmitted in a letter dated February 23, 1984. The proposed changes would remove the conditions to the license that were implemented by the Commission's Order dated January 9, 1981. These conditions required, as an interim measure, for the licensee to provide an automatic scram from degraded air supply conditions until improved hydraulic coupling was incorporated into the system.

2.0 Evaluation

As part of the short-term requirements, the Commission issued Orders for Modification of License which required licensees to promptly implement certain actions to assure the safe operation of BWRs with inadequate scram discharge volume (SDV) to instrument volume hydraulic coupling. One of the deficiencies identified in the Generic SER was a failure mode of the control air system, which could conceivably cause an inability to scram the control rods. Sustained low pressure in the control air system could result in complete or partial opening of multiple scram outlet valves before the opening of scram inlet valves, thereby causing the SDV to fill rapidly, thus leaving a relatively short time for the operator to take corrective action before scram capability is lost.

Therefore, as part of the short-term program to provide prompt added protection for credible degraded air conditions in BWR control air supply systems, the staff added license conditions that required an automatic system to be operable by April 9, 1981. The automatic system would initiate control rod insertion by rapidly dumping the control air system header if the air pressure decreased below a prescribed value. The long-term solution to this problem is improved hydraulic coupling. During the 1983 refueling outage the licensee modified the SDV system to improve hydraulic coupling. Hydraulic coupling will assure detection by level instrumentation and thereby provide a timely automatic scram, independent of the inleakage rate when the SDV headers fill.

We have reviewed the licensee's request to remove the interim conditions from the license and find the licensee's request acceptable because long-term hydraulic coupling has been improved between the scram discharge headers and the instrument volume as discussed above.

Based on the discussion presented above, we conclude that items (1) and (2) of Section IV of the January 9, 1981 Order for Modification of License can be deleted from Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Plant.

### 3.0 Environmental Considerations

This amendment involves a change in the 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 offsite, and that there is 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 this amendment.

### 4.0 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 the issuance of this 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: August 1, 1984