



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

SAFETY EVALUATION BY THE  
OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 13 TO  
FACILITY OPERATING LICENSE NO. R-95  
RHODE ISLAND ATOMIC ENERGY COMMISSION  
DOCKET NO. 50-193

Introduction

By letter dated January 15, 1985, Rhode Island Atomic Energy Commission requested an amendment to their technical specifications which would change a "design" specification to a "performance" specification for reactor shut-down conditions.

Evaluation

The current "design" specification in Section k.3.e(3)(a) of the technical specifications is as follows:

"(3) Principal Nuclear Characteristic of the Core

(a) Core and Control System Reactivity Worth (for 28 fuel elements, graphite reflected core)

- |                             |                               |
|-----------------------------|-------------------------------|
| 1. All control elements     | minimum of 0.17 $\Delta$ k/k  |
| 2. Each control element     | minimum of 0.035 $\Delta$ k/k |
| 3. Each control element     | maximum of 0.070 $\Delta$ k/k |
| 4. Servo regulating element | maximum of 0.007 $\Delta$ k/k |

The requested amendment changes the above design specification to a performance specification indicating the shutdown margin of the control elements with the most reactive control element and the servo regulating element fully withdrawn.

The requested amendment to Section K.3.e(3)(a) is as follows:

(3) Principal Nuclear Characteristic of the Core

(a) Core and Control System Reactivity Worth

1. The reactor shall be subcritical by at least 1%  $\Delta$  k/k from the cold, Xe-free, critical condition with the most reactive control element and the servo regulating element fully withdrawn.
2. The maximum worth of the servo regulating element shall be 0.7%  $\Delta$  k/k.

All other core and reactivity specifications remain unchanged.

As the amended specification assures that the reactor can be shut down from any operating condition and will remain shut down after cooldown and xenon decay, even if the highest worth control element and the servo regulating element should be in the fully with drawn positions, the proposed amendment is a more positive statement than the current specification. With varying core component reactivity worths, the new performance specifications provide simpler evaluation of the safety characteristics of the reactor core.

Environmental Consideration

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 (i) the amendment involves no significant hazards consideration (see conclusion below), (ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and (iii) there is no significant increase in individual or cumulative occupational radiation exposure. 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 issuance of this amendment.

Conclusion

The staff concludes, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously evaluated, or create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; and (3) 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.

This Safety Review was prepared by: Harold Bernard