



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

SAFETY EVALUATION BY THE NUCLEAR REGULATORY COMMISSION
RELATED TO AMENDMENT NO. 44 TO FACILITY OPERATING LICENSE DPR-34
PUBLIC SERVICE COMPANY OF COLORADO
FORT ST. VRAIN NUCLEAR GENERATING STATION
DOCKET 50-267

INTRODUCTION

By letter dated May 10, 1984, Public Service Company of Colorado (PSC, the licensee) applied for changes to the Fort St. Vrain Technical Specifications (TS). The proposed changes would revise the sampling and analysis requirements for determining the radioactivity contained in the secondary (steam and water) coolant system.

BACKGROUND

PSC proposed a change to the TS by application dated May 10, 1984, which would: (1) eliminate the requirement that daily sampling of secondary coolant commence if the secondary coolant activity level increases by a factor of 25% over the previous equilibrium value at the same reactor power level, and (2) increase the sampling and analysis frequency at an action level of 10% versus 25% of the Limiting Condition of Operation (LCO). The basis for this proposal is the difficulty in establishing a meaningful equilibrium value and the fact that the activity levels being experienced are well below the LCO limits (e.g., 0.01% of the limits of LCO 4.3.8).

EVALUATION

The limits for the radioactivity contained in the secondary coolant system are presented in LCO 4.3.8. These limits (0.009 microcurie/cc of I-131 and 6.8 microcuries/cc of tritium) were established "to limit the exclusion area boundary [radiation] dose to less than the suggested limits in the event of the accident involving loss of outside power, main turbine trip, and failure of one diesel generator to start (FSAR Section 10.3.2)." PSC does not propose to change these limits; the changes involve the sampling and analysis frequency to ensure that the activity is adequately monitored. PSC further states that the normal secondary coolant activity levels are approximately 0.01% of the limit of LCO 4.3.8, and that at these low activity levels the tritium activity can vary from 15% below to 40% above the average at a constant power level. It is, therefore, difficult to establish an equilibrium value and, when established, the equilibrium value is of little meaning. For

these reasons, PSC proposed the following two changes: (1) the deletion of the requirement for daily sampling and analysis if the activity increases by a factor of 25% over the equilibrium value, and (2) the lowering of the level at which daily sampling would be required from 25% to 10% of the limits of LCO 4.3.8.

We have reviewed the existing requirements and the proposed changes to ensure that the basis for the original requirements (i.e., to ensure that the plant is operated within the established limits) would continue to be fulfilled. We note that the present requirements for weekly sampling and analysis will not be changed by the proposal nor will any of the activity limits. We have determined that requiring increased analysis on the basis of a change in the equilibrium value does not provide significant additional protection or information when the equilibrium value is very low. We further agree with the licensee that an acceptable level at which daily analysis should commence is 10% of the limit of LCO 4.3.8.

Since neither the activity limits nor the normal sampling and analysis frequency have been changed, we have concluded that the level of protection has not been changed. The changes related to escalated sampling and analysis frequency have been found acceptable because they will continue to provide for close monitoring of the radiological status of the secondary coolant system. Therefore, we find the proposed changes to be acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment changes an inspection or a surveillance requirement. 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.

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.

Dated: October 26, 1984

The following NRC personnel have contributed to this Safety Evaluation:
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