



CONNECTICUT YANKEE ATOMIC POWER COMPANY

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November 22, 1985

Docket No. 50-213  
BI1885

Director of Nuclear Reactor Regulation  
Attn: Mr. John A. Zwolinski  
Operating Reactors Branch #5  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

- References: (1) D. M. Crutchfield letter to W. G. Counsil, dated July 13, 1982.
- (2) D. M. Crutchfield letter to W. G. Counsil, dated May 18, 1984.
- (3) W. G. Counsil letter to D. M. Crutchfield, dated May 25, 1985.

Gentlemen:

Haddam Neck Plant  
Cycle 13 Coastdown, Turbine Overspeed Protection System Surveillances

Introduction

This letter is being forwarded "for information only" to inform the Staff of a circumstance unique to the Cycle 13 coastdown. The specifics with regard to Turbine Overspeed Protection System surveillance testing are discussed below.

Turbine Overspeed Protection  
System Surveillances

Via Reference (1), the Staff issued a Safety Evaluation Report (SER) for SEP Topic III-4.B, Turbine Missiles, for the Haddam Neck Plant. As part of that evaluation, the Staff reviewed the testing program for the overspeed protection system, including surveillance performed on the turbine stop and control valves. Reference (1) notes that every 30 days while the plant is operating, power is reduced and each stop and control valve combination is sequentially exercised. In addition, the SER concludes that the testing program of the overspeed protection system, including the stop and control valves, provides reasonable assurance that the overspeed protection system will remain operable and thereby limit the likelihood that overspeed past the design conditions would occur.

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The Haddam Neck Plant is presently at the end of full power core life. Connecticut Yankee Atomic Power Company (CYAPCO) has decided to operate the Haddam Neck Plant in a coastdown mode for approximately 2 months past the end of Cycle 13 full power core life. The coastdown mode of operation was approved by the Staff as reflected in the license amendment issued by Reference (2).

The extended coastdown this cycle is desirable in that it has eliminated any overlap between the Millstone Unit 1 outage and CY and by not shutting down at the end of full power core life it reduces the amount of oil required to be burned for replacement generation.

In order to perform surveillance testing on the turbine stop and control valves, generated power must be reduced to 400 MWe (power is limited by the capacity of the alternate inlet line since the Haddam Neck turbine does not have a crossover line). This results in an increase in Tave. In order to lower Tave, it is necessary to either drive in control rods or add boron. Due to the minimum rod height limitations in the Technical Specifications which ensure minimum shutdown margin, lowering of Tave through the use of the control rods alone is not feasible. Therefore, temperature must be reduced by the addition of boron to the primary coolant.

The addition of boron, though certainly possible, poses additional problems. After power is reduced and surveillance completed, the boron would then need to be removed from the primary system through the ion exchange process. This process is a slow one, and the return to full power would also be slow. More importantly, the use of ion exchange results in a significant radiation exposure and also generates a significant quantity of radioactive waste. Thus, power reductions while operating in a coastdown mode are not a simple process.

Routine surveillance on the turbine stop and control valves was last performed on October 27, 1985. No problems were identified. The valves also operated satisfactorily during plant trips on November 10, 1985 and November 21, 1985. Based on an expected shutdown date January 4, 1986, we would expect to perform surveillance on these valves two more times. However, based on the above considerations, namely the man-rem exposure associated with ion exchange and the generation of additional radioactive waste, CYAPCO has determined that additional stroke testing of the turbine stop and control valves at this point in coastdown operation is not warranted. Following the refueling outage, we will resume our practice of performing surveillance on these valves every 30 days.

No response is being requested from the Staff on this matter. This letter is being docketed for information purposes only as it relates to SEP Topic III-4.B. No Technical Specification provisions or license conditions are affected. It

should be noted that similar circumstances occurred during the Cycle 12 coastdown. Reference (3) forwarded that associated informational letter.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

J. F. Opeka  
J. F. Opeka  
Senior Vice President

C. F. Sears  
By: C. F. Sears  
Vice President