



CONNECTICUT YANKEE ATOMIC POWER COMPANY

BERLIN, CONNECTICUT

P. O. BOX 270 HARTFORD, CONNECTICUT 06101

TELEPHONE  
203-666-6911

August 11, 1980

Docket No. 50-213  
B10052

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

References: (1) W. G. Council letter to D. G. Eisenhut dated February 14, 1980.  
(2) R. H. Graves letter to B. H. Grier dated February 12, 1980,  
transmitting LER No. 80-04/3L.

Gentlemen:

Haddam Neck Plant  
Pressurizer PORV's and Block Valves

Over the past several weeks, our respective Staffs have had a number of discussions relating to the subject valves at the Haddam Neck Plant. In light of the accident at TMI, the Haddam Neck Plant's mode of operation for the PORV's and their associated block valves had caused concern among some members of the NRC Staff that an increased potential for a small-break LOCA might exist. Additional information was requested by the Staff and relayed verbally by Connecticut Yankee Atomic Power Company (CYAPCO). It also became clear that the information submitted in Reference (1) needed to be clarified.

This letter docket the clarifications and information of these discussions in an effort to expedite resolution of the Staff's concerns.

The following clarifications are offered in relation to the February 4, 1980 spurious actuation of one of the PORV's and its associated block valve as discussed in Reference (1):

- a) The PORV was closed from the main control board using the existing manual override capability of the three-position (open-close-auto) control switch. This action terminated the event.
- b) The block valve was closed manually by resetting the relay, on the back of the main control panel. This relay is actuated by the same signal which opens the PORV.

8008200304

P

- c) Both of these actions, "a" and "b" above, were accomplished within approximately ten seconds of receipt of the alarms.
- d) The second PORV and its block valve remained in service, as did the three-code safety valves.

The following information is offered on the current mode of operation for the PORV's and block valves:

- (1) The block valves are in the closed position during normal operation to prevent possible leakage through the PORV's. The block valves are therefore opened automatically by the same signal which opens the PORV. Previous experience at the Haddam Neck Plant has shown that leakage through the PORV will accelerate erosion of the valve. The original PORV's were replaced in 1977 for this reason. When the new PORV's went into service, operation with the block valves closed was, and has been, continued as a preventive measure.
- (2) In the event of a spurious "open" signal, or its failure to clear, the PORV can be closed from the main control board using the manual override of the currently installed handswitch.
- (3) If the PORV fails to close due to some mechanical failure, the block valve will automatically reclose when reduced pressure is sensed and the "open" signal clears.
- (4) Loss of air to the PORV or loss of power to the PORV solenoid, causes the PORV to close. A loss of power to the pressure channel will cause the PORV to open.
- (5) The presently installed PORV's are each capable of relieving approximately 200,000 pounds per hour at the relief setpoint. This is approximately five times the capacity required for any license-basis accident.

CYAPCO has agreed to write specific instructions into its procedures on manually closing the block valve in the event of a stuck open PORV and a persistent spurious "open" signal. These instructions will identify the relay on the back of the main control panel which must be reset and the breaker which must be opened.

It should be noted that, as a result of the spurious PORV and block valve operation on February 4, 1980 (see References (1) and (2)), CYAPCO reviewed this system and concluded that a three-position handswitch on the main control board for each of the block valves, similar to those for the PORV's, would be desirable. This will provide manual override capability for the block valves. As indicated to the Staff, due to the manpower commitments on TMI-related efforts, CYAPCO estimates this modification will take approximately 120 days to engineer and design. To preclude the possibility of a spurious trip and unnecessary challenge to plant safety systems, this system should be installed and tested while the plant is shut down. We, therefore, propose to have this system installed, tested, and

functional prior to startup from the first outage of sufficient length, subsequent to completion of the design effort, but not later than startup from the 1981 refueling outage.

We trust this information is sufficient to resolve the Staff's concerns on this subject.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

A handwritten signature in cursive script, reading "W. G. Council", is written over a horizontal line.

W. G. Council  
Senior Vice President