



CONNECTICUT YANKEE ATOMIC POWER COMPANY

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October 24, 1980

Docket No. 50-213  
A01170

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20545

- References: (1) D. G. Eisenhut letter to W. G. Council dated September 30, 1980.  
(2) W. G. Council letter to D. G. Eisenhut dated August 5, 1980.  
(3) R. H. Graves letter to B. H. Grier dated February 12, 1980,  
transmitting LER No. 80-04/3L.  
(4) W. G. Council letter to D. G. Eisenhut dated February 14, 1980.

Gentlemen:

Haddam Neck Plant  
Pressurizer PORV's and Block Valves

Reference (1), which was telecopied to Connecticut Yankee Atomic Power Company (CYAPCO) on October 6, 1980, relays the NRC Staff's understanding of the numerous discussions and correspondence which have transpired on this topic. In addition, it requests that CYAPCO commit to installing the override-to-close capability for the block valves, proposed by CYAPCO in Reference (2), by October 30, 1980.

CYAPCO would like to clarify some points discussed in Reference (1). As explained verbally to the Staff several times, the block valves, although originally operated in the normally open position, have operated in the normally closed position since very early on in the Haddam Neck Plant's operating life. The design logic has always been such that the PORV and block valve in each train are opened by the same signal. There is also separate manual override-to-open capability on each block and PORV and separate manual override-to-close on each PORV. The original PORV's developed seat leakage within the first 18 months of plant operation, and the decision was made to operate with the block valves normally closed to prevent accelerated erosion of the PORV seats. When new PORV's were installed in 1977, the Plant continued to operate with the block valves normally closed because of the positive leak tightness provided while still ensuring relief capability via the automatic opening scheme or manual overrides.

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CYAPCO pointed out in Reference (2) that when the spurious opening of February 4, 1980 (Reference (3)) occurred, an operator closed the block valve within ten (10) seconds by manually resetting the relay located on the back of the control panel. This experience should demonstrate to the Staff that while the proposed board-mounted switches will be an additional aid for the operators, they are not necessary to prevent a small-break LOCA situation from developing. In addition, also in Reference (2), CYAPCO committed to and has since put in place, specific procedural instructions on manually closing the block valves, thus providing an additional measure to assure a timely and accurate response by the operators to this type of event.

Again in Reference (2), CYAPCO indicated concerns over installation of this modification while the plant is at power. The work requires drilling holes in the main control board, which will cause vibrations and generate metal shavings, either of which could cause a short-circuit and generate a spurious plant trip. A spurious trip is, at best, an undesirable situation and a totally unnecessary challenge to the plant's safety systems. Testing of the installation would require defeating the logic for the PORV's. CYAPCO can take extraordinary precautions to minimize the possibility of a spurious trip or a small LOCA which might occur due to a design or installation error; however, CYAPCO cannot justify taking such necessary measures to minimize the threat to plant operation, just to install what it considers to be largely an operator convenience item.

The Staff has indicated that the existing configuration, which functionally has the manual override-to-close switch on the back of the control panel (i.e., the relay) rather than the front, represents a risk which should not be tolerated until the next cold shutdown, quite possibly the next refueling outage. This position is advanced despite the fact that the Haddam Neck Plant has operated safely and reliably for over ten years with this same configuration, despite actual demonstrated experience which indicates how quickly, with the existing configuration, the block valve can be closed, and despite the additional procedural precaution requested by the Staff which is in place. CYAPCO is concerned by the inappropriate level of urgency which has been attached to this issue.

It is CYAPCO's position that the small risk represented by the current configuration, and which CYAPCO concludes is minute, must be weighed against the small, but nonetheless, finite risk of an unnecessary shutdown of the Plant. The additional thermal cycle(s) imposed on the numerous components in the Plant will have a small but finite effect on each component's operating life. CYAPCO believes, based on experience, that there is a strong possibility of reactor coolant pump (RCP) seal problems developing during heatup, which would cause additional thermal cycles on equipment from cooldown of the affected RCP's loop. A small but finite risk is also presented by the possibility of inappropriate valve or system lineups on startup.

Given the points of the preceding paragraph, CYAPCO finds it impossible to conclude that the small risk of interim operation with the existing configuration exceeds or even equals the small risks of an unnecessary shutdown. Please note

that it is not CYAPCO's intent to call shutting the plant down hazardous; it is our intent to put the issue into the proper perspective.

The Connecticut Yankee Nuclear Review Board has reviewed the existing configuration and the planned modification. Their finding is that the existing configuration does not represent a risk to safe operation which would justify an untimely shutdown of the Plant to install the modification, or which would justify threatening safe operation of the Plant by installation and testing on-line.

It should also be noted that CYAPCO is in the process of reviewing an INPO Significant Operating Experience Report, No. 80-5, and its effect on the design of the control system for the PORV's and block valves. Upon completion of this review, CYAPCO may determine that further changes are appropriate which might impact the installation and/or operability of the handswitches. Given this possibility, it would be imprudent to rush into installation of these switches.

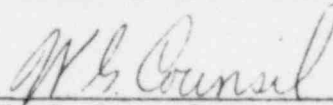
Should the plant shut down to perform installation and testing of the handswitches, which will take an estimated two to two-and-one half days, an outage of four to five days will be necessary, including cooldown and heatup, which would cost an estimated \$2.4 million for replacement power. In light of the conclusions on the relative safety significance of the current installation presented above, there is no way CYAPCO can justify this kind of expense to its consumers.

At this point, CYAPCO reiterates its commitment of Reference (2) to install and test these switches before startup from the next cold shutdown, but not later than startup from the next refueling outage. Unless the Staff can docket compelling reasons to the contrary, it is CYAPCO's firm conclusion that the minimum additional benefit afforded by this modification does not justify the cost of a specific shutdown for its installation and testing, nor does it justify taking the extraordinary measures required to minimize the potential impact of on-line installation and testing on plant operation.

We trust that the foregoing information is sufficient for the Staff to understand and concur in our conclusions.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY



W. G. Council  
Senior Vice President