



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

September 30, 1980

Docket No. 50-213

Mr. W. G. Council, Vice President
Nuclear Engineering and Operations
Connecticut Yankee Atomic Power Company
Post Office Box 270
Hartford, Connecticut 06101

Dear Mr. Council:

Our respective staffs have had a number of discussions over the past several weeks concerning the operation of the pressurizer power operated relief valves (PORV) and their associated block valves at the Haddam Neck Plant. These discussions arose from our review of LER No. 80-04/3L which was submitted on February 12, 1980.

This LER described a spurious actuation of one of your PORV's and its block valve and the subsequent actions taken by the operating shift crew to shut the valves when the pressure channel which initiated the transient failed. On August 11, 1980 you submitted additional information in order to clarify some matters which were not fully covered in the LER. Based on our review of this submittal, it is the staff's understanding that:

1. The PORV block valve was originally designed to be open during normal operation, but as a result of seat leakage through the original PORV's you decided to modify the operation of the block valves to keep high temperature steam off of the seats of the new PORV's which were installed in 1977.
2. As currently configured each PORV and its associated block valve are opened simultaneously by a signal from the single pressure channel. There are two pressure channels installed, with each channel independently controlling a PORV/block valve combination.
3. The automatic signal from the pressure channel to the PORV can be interrupted by the PORV manual control switch; so that, if the pressure channel fails in such a way as to provide an erroneous "open" signal, then this signal can be overridden.

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4. However, for the PORV block valve, the automatic "open" signal from the instrument channel cannot be overridden by a manual "close" signal. Therefore, any of several single failures associated with the pressure channel, including loss of power to the channel, will cause the spurious opening of both the PORV and its associated block valve plus cause loss of manual closure capability of the block valve from the front of the control panels. The basic deficiency appears to be that the manner currently used to couple the automatic signals into the control circuit for the block valve is such that an automatic "open" signal prevails over a manual "close" signal.
5. During the event which was described in LER 80-04/3L the PORV was shut by placing its manual control switch in the "close" position, thus overriding the automatic "open" signal. The block valve was shut temporarily by manually overriding a control relay behind the control panel. To hold the block valve closed, a circuit breaker outside the control room was tripped.

In our recent discussions with your staff we expressed several concerns about this mode of operation. Specifically, we feel that if the PORV had failed to reseat in the recent incident, then the operator would have had no readily available means at the front of the control panel to shut the block valve and thereby terminate a small break LOCA.

In addition, we also had a concern that the failure of both the PORV and block valve to open when required could result in a challenge to the code safety valves. Your submittal of August 11, 1980 states that each PORV has a relieving capacity which is five times the capacity for any license-basis accident. We have, therefore, concluded that it is unlikely that the failure of one PORV pressure relief train will unnecessarily challenge the code self-actuated safety valves.

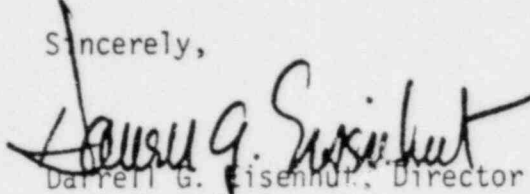
You also stated that as an interim measure you would incorporate specific and detailed instructions into your procedures which would clearly describe the actions to be taken at stations away from the front of the control panel in order to shut the PORV block valves when a persistent "open" signal is sent by the pressure channel. As a final resolution to this problem you further agreed to change the manual control switch for the block valve so that it could override an automatic "open" signal from the pressure channel.

We find these actions to be an acceptable resolution of the problem, but conclude that they should be implemented sooner than you have

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indicated. We, therefore, request that you submit to us a schedule which would result in the installation by October 30, 1980, of an override capability for the PORV block valve.

Sincerely,


Darrell G. Eisenhut, Director
Division of Licensing

cc: See next page

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