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BECo. Ltr. #83-87

Mr. Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

License No. DPR-35
Docket No. 50-293

Reference: (A) BECo Letter #80-395 (J. E. Howard) to NRC (T. A. Ippolito) "Proposed Technical Specification Change Concerning Single Loop Operation", dated November 21, 1980

(B) BECo Letter #81-94 (J. E. Howard) to NRC (T. A. Ippolito) "Revised Request for Technical Specification Changes Concerning Single Loop Operation", dated May 12, 1981

(C) NRC Letter (D. B. Vassallo) to BECo (A. V. Morisi) dated August 26, 1982 (BECo Number 1.82.261)

Dear Sir:

Attached please find our response to your questions regarding single recirculation loop operation at Pilgrim Nuclear Power Station.

Should you have any further questions on this subject, please do not hesitate to contact us.

Very truly yours,

W D Harrington

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Attachments

Enclosure 1

1. Describe how the change from normal two recirculation cooling loop operation to single loop operation would be accomplished. What physical, electrical, and/or administrative controls would be employed to satisfy the requirements of BTP EICSB-12 and IEEE Std. 279-4.15 regarding multiple setpoints and their control.

   Response:

   The change from two to single loop operation would be accomplished by an automatic trip of a pump or manual removal. An automatic trip would open the motor feeder circuit breaker. Manual removal is accomplished by reducing the speed of the pump to minimum flow and opening the motor feeder circuit breaker. Manual removal would be accomplished by procedure.

   The APRM rod block and scram setpoints, and the RBM setpoints presently have independent circuitry for each recirculation loop. When one pump is out of service, these controls will automatically adjust for a reduced flow, however, will not correct for backflow through the idle jet pumps.

   This mode of operation presently is allowed for 24 hours. Should plant personnel determine that single loop operation is required longer than 24 hours, by the proposed Tech. Spec. (3.6.F.2) the plant personnel would be required to adjust these setpoints for single loop operation. This change is governed by Administrative Control and performed by procedure.

   A change to single loop operation also requires adjustment to the Minimum Critical Power Ratio (MCPR) fuel cladding integrity safety and operating limits and the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR). Presently, these are checked daily by procedure. Upon approval of this Tech. Spec. change, these procedures will be revised to include all values for single loop operation.

2. Describe changes made to the flow computer to automatically account for magnitude and sense change for reverse flow in the idle loop jet pumps during single loop operations.

   Response:

   During single loop operation, the operator supplied values of core flow will be entered into the process computer to account for the magnitude and sense change for reverse flow in the idle loop jet pumps. Once sufficient core flow and drive flow data during single loop operation have been obtained, the process computer curve of drive flow vs. core flow will be changed in order for the computer to calculate the true core flow during single loop operation.

3. Is there a requirement for the recirculation flow equalizer valves to be closed and tagged prior to commencing single recirculation loop operation as stated in NEDO-24268 Page 1-1/1-2 and how is this requirement ensured in the Technical Specification change?

Response:

BECo is requesting relief from License Condition 3-E "Recirculation Loop Inoperable". Please note in our proposed Technical Specification change #81-02 dated May 12, 1981 - Attachment B clearly shows License Condition 3-D "Equalizer Valve Restriction" would remain a condition of License.

4. Where set point adjustments for single loop operation are required, is sufficient range available on the adjustment mechanisms to keep the new settings within the stable operating portion of the adjusting device?

Response:

The required adjustment, to lower the intercept is well within the calibration adjustment of the module and the circuit. Routine calibration begins with zero intercept and extends to the 55% point, concurrent with two loop operation. The single loop set point falls in between.