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September 24, 1984  
BECO. 84-160

WILLIAM D. HARRINGTON  
SENIOR VICE PRESIDENT  
NUCLEAR

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

Recirculation System Startup Test Program

- Reference:
- 1) Reg. Guide 1.68, "Initial Test Program for Water Cooled Nuclear Power Plants"
  - 2) Facility Operating License No. DPR-35 for PNPS - Condition of License #3.E.
  - 3) General Electric Co. Startup Test Instructions for "Recirculation System" dated May 1971
  - 4) PNPS Operating Procedure #2.4.17, "Trip of One Recirculation Pump"

Boston Edison is presently in the process of planning the startup test program for Pilgrim Nuclear Power Station (PNPS). Per your order of August 26, 1983 (part III C 4), we have replaced the recirculation system piping during RFO #6. As such, we believe the startup test program for the recirculation system falls under the auspices of Reg. Guide 1.68.

We have reviewed our initial test program dated May 1971 and determined several tests must be performed during startup from RFO #6. Specifically, startup test titled "Recirculation System" will be conducted to evaluate recirculation flow and power level transients following the trip of a recirculation pump.

The basic procedure (from 1971) is as follows:

1. Establish steady-state operating conditions.
2. Record data for a Core Performance Evaluation.
3. Record LPRM and APRM data or use process computer if available.
4. Start the recorder and collect at least 5 seconds of steady-state data.
5. Trip the power to the M-G set driving Recirculation Pump.
6. Isolate the tripped recirculation pump by closing it's associated discharge valve.

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7. When steady-state conditions are achieved, stop the test recorder and repeat Steps 2 and 3 above.
8. Return to two pump operation from one pump tripped in accordance with standard operating procedures.

A trip of a recirculation pump is governed by Condition of License #3.E "The reactor shall not be operated with one recirculation loop out of service for more than 24 hours...the plant shall be placed in hot shutdown condition within 24 hours unless the loop is sooner returned to service". This condition will be met as the testing will only last 4-6 hours.

In conclusion:

- 1) This test is similar to that performed during initial startup;
- 2) PNPS is designed for a loss of one or both recirculation pumps;
- 3) The test will be conducted in accordance with 10CFR50.59 with procedures (updated from 1971) approved by the PNPS Operational Review Committee.

This letter is submitted for your information. Should you have any questions, please do not hesitate to contact us.

Very truly yours,

*W.D. Huntington*

MTL/ns