BOSTON EDISON

Pilgrim Nuclear Power Station
Rocky Hill Road
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Ralph G. Bird
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August 4, 1988
BECo Ltr. #88-117

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

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

Subject: Rosemount Transmitter "Ringing"

Dear Sir:

On February 29, 1988, Boston Edison Company (BECo) submitted letter 88-033 which provided responses to NRC questions and concerns regarding the Pilgrim Power Ascension Program.

We are providing additional information necessary to answer the question of how the Pilgrim test program will demonstrate and/or evaluate the extent to which Rosemount 1153 transmitters are sensitive to pressure oscillations during major transients, and whether "ringing" of the output will cause unnecessary actuations of safety systems. This was requested in the Management Meeting Summary for the April 8, 1988 meeting.

General Electric Service Information Letter (SIL) No. 463 and Engineering Service Request (ESR) No. 88-340 have identified the Rosemount 1153 transmitters as being susceptible to process noise inherent in various BWR systems. This noise, if left unchecked, may potentially result in operational problems such as inadvertent safety system initiation.

The Nuclear Engineering Department (NED) performed an evaluation of the Rosemount transmitters installed at Pilgrim under Plant Design Change (PDC) No. 84-70 and has concluded that Pilgrim's applications are not susceptible to a significant "ringing" problem.

The likelihood of an inadvertent safety system trip due to the sensitivity (ringing) of Rosemount transmitters at PNPS is very low. This conclusion is based on the following:

- Design conditions associated with the system noise sensitivity issue identified at other operating units do not exist at Pilgrim Nuclear Power Station (PNPS).

- PNPS Reactor Water Level transmitters have design response times that are much slower than other transmitters which have experienced problems elsewhere in the industry. The PNPS transmitter slower response time should prevent transmitter response to the noise characterized as causing problems at other plants.

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o PNPS Main Steam Line Flow transmitters would have to be subjected to noise of up to 25 psid to trip during transient conditions. This is physically unrealistic and well beyond the range of noise observed in the industry.

The above justification provides reasonable assurance that a significant "ringing" problem will not be experienced at PNPS during power operation. On this basis, a trip of the Analog Trip System (ATS) due to transmitter "ringing" is not expected. Should a trip of the ATS occur due to transmitter "ringing", this would not place the plant in an unsafe condition.

In order to confirm the absence of the "ringing" problem at the Pilgrim Station, Boston Edison Company is initiating the following action.

The Rosemount 1153 Transmitters that provide input signals to the Analog Trip System (ATS) installed during RFO#7 will be provided with monitoring tie-ins to the Emergency and Plant Information Computer System (EPIC). During Plant Operation the output of these instruments will be monitored and recorded for subsequent evaluation. If the EPIC System is operational, this monitoring will be performed during the Power Ascension Program (PAP); otherwise, it will be performed during Power Operations following the PAP. The results of this monitoring is expected to confirm the absence of the "ringing" problem at the Pilgrim Station.

No further action regarding the "ringing problem" associated with Rosemount Transmitters is planned at this time pending evaluation of the recorded EPIC data. Boston Edison will assess the significance of any identified "ringing" and decide whether further testing or other action is warranted.

Please do not hesitate to contact me directly if there are further questions or comments regarding this response.

R.G. Bird

RLC/bl

cc: Mr. William Russell
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Sr. Resident Inspector - Pilgrim Station