

Citizens Urging Responsible Energy

December 5, 1990

Kenneth M. Carr, Chairman
US Nuclear Regulatory Commission
1717 H Street, NW
Washington, D. C. 20555

Dear Chairman Carr:

On September 2-3, 1990, the Pilgrim Nuclear Power Station in Plymouth experienced a serious operating event when a single blown fuse caused the feedwater regulating valve control system to fail. Operators tried unsuccessfully to control reactor vessel water level for one-half hour, then manually scrammed the reactor. Following the shutdown, multiple component malfunctions occurred in safety systems. Reactor water level fluctuated wildly from more than 21 inches below normal to 23 inches above normal in three minutes. Shutdown cooling was finally achieved 19 hours later.

These events illustrate how the failure of non-safety related equipment can lead to an unstable condition, requiring the activation of several emergency systems. Furthermore, the problems were exacerbated by multiple failures of safety related systems; caused by errors in operating procedures, inadequate maintenance, and continued design deficiencies.

According to NUREG-0654, at least three examples of initiating conditions for the declaration of an "Unusual Event" existed during this operating event, yet one was not declared:

1. Item 1. "Emergency Core Cooling System initiated and discharge to vessel"
NRC Inspection Report 50-293/90-21 (Attachment I) Chronology of Events, page 3 states: "00:20 a.m. - Operators started HPCI and injected for 2 minutes then secured HPCI (times are approximate)"

2. Item 11. "Indications or alarms on process or effluent parameters not functional in control room to an extent requiring plant shutdown or other significant loss of assessment or communication capability"
Attachment I, page 8 states: "The operators manually shutdown

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the reactor at 10:33 p.m. after concluding that the feedwater regulating valves had failed and could not be operated from the control room. Throughout the reactor water level transient, the operators had no alarms or direct indications that indicated the FRVs had malfunctioned other than reactor water level not responding as expected."

3. Item 15. "Other plant conditions exist that warrant staff or State and/or local offsite authorities or require plant shutdown under technical specification requirements or involve other than normal controlled shutdown" Attachment I, Chronology of Events, pages 2 & 3 state: "Emergency Operating Procedures (EOP) were entered at 10:34 p.m., EOP-1 for RPV control, and at 00:03 a.m. and 00:34 a.m. respectively, EOP-3 for Primary Containment Control due to high suppression pool temperature of 80 degF, and high suppression pool water level (132 inches)" Additionally, operators cycled safety relief valves and recirculation feedwater pumps for pressure and water level control during this event. It is our understanding that operators were called into the plant with beepers between 1:00-2:00 a.m.

In a rash of candor, Boston Edison described this event to the media as "...simply a mechanical malfunction." (Elaine Robinson, Patriot Ledger, 9-4-90) The NRC said, "...the operators did respond in an excellent fashion..no limiting condition was exceeded and no automatic action was required.."(E. McCabe, Boston Globe, 9/13/90)

We have noted, since this dialogue, that BECo immediately formed a 38 member Multi-Disciplined Analysis Team to investigate the event; subsequently, the NRC dispatched a special inspection team to the site September 5-7, and further scheduled a special conference with BECo in King of Prussia, Pa., announcing that BECo had "agreed not to restart" until issues were fully understood. On November 5th, a special NRC maintenance inspection scheduled for the spring was put in action, said to be, in part, as a result of the September failures. Finally, the Advisory Committee on Reactor Safeguards (ACRS) has scheduled a meeting in Bethesda, MD. December 6-8 which includes the following agenda item: "Reactor Operating Experience - Briefing by NRC staff regarding experience gained from reactor operations including problems with the operability of safety systems resulting from.., a malfunction of the feedwater regulatory system and subsequent failure of the Reactor Core Isolation Cooling at the Pilgrim Plant."

We find this a peculiar commitment of resources for a "mechanical malfunction." We remind you that over 100,000 residents live in the shadow of Pilgrim and their only protection is a radiological emergency response plan that had "interim approval" withdrawn over 3 years ago by the lead agency in planning, the Federal Emergency Management Agency (FEMA); which declared the Pilgrim plan "inadequate to protect the public health and safety."

We charge that the Boston Edison Company's failure to declare an "Unusual Event", providing early notification to residents of the emergency planning zone, was a violation of NRC regulations and a breach of the public trust.

We ask that the NRC investigate implications of this event as it relates to the Massachusetts Department of Public Utilities Rate Case Agreement with BECo, particularly regarding the manual override of automatic systems to prevent an automatic scram. Economic incentives for capacity factors also pose a safety risk.

In closing, we again request, as we have through the Governor's and Senator Kennedy's office, a complete transcript of the September 12, 1990 meeting in King of Prussia. Our technical group has been hindered in their attempt to formally evaluate the events of September 2-3 because of the NRC's apparent refusal to provide this information.

When authorizing Pilgrim's restart in December, 1988, you assured us that the management and equipment issues which caused the plants 32 month shutdown were resolved. The September 2-3 event marked Pilgrims 13th unplanned shutdown in 20 months of operation. We remind you of the eloquent words of former Chairman of the Plymouth Board of Selectmen, Alba Thompson, who said: "Yours is the decision, ours is the risk."

We look forward to your response to the issues raised at your earliest convenience.

Sincerely yours,

Donald Muirhead, Jr. M.D.

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Co-Chairmen, Duxbury CURE

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