

**Boston Edison**

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

E. T. Boulette, PhD
Senior Vice President - Nuclear

October 3, 1994
BECO Ltr. #94-120

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

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

Pilgrim Nuclear Power Station Response to
Feedwater Trip Technical Specifications (TAC #M74981)

By letter dated June 20, 1994, the NRC requested information from the Boston Edison Company (BECO) concerning the reactor vessel overfill (feedwater) protection trip vis-à-vis an NRC Safety Evaluation (SE) issued in response to a Boiling Water Reactor Owners Group (BWROG) initiative. This system was installed at Pilgrim in the late 1970's and described in our letter of May 4, 1990, made in response to Generic Letter (GL) 89-19.

The description provided in that letter is of a "2 out-of 2" design. The NRC SE of June 24, 1994 applies to Pilgrim's Main Feedwater Pump (MFP) trip on high reactor water level, and Pilgrim was listed in NUREG 1218, "Regulatory Analysis for Resolution of USI A-47", Table A.1, which is one of the SE's criteria.

Our May 4, 1990, letter confirmed that PNPS operators are trained on the MFP trip system, associated emergency operating procedures (EOPs), and receive simulator training on the EOPs.

Our May 4, 1990 letter also explained that Pilgrim's Technical Specifications do not include requirements specifically related to the MFP trip. We have reviewed your June 20, 1994, request to incorporate Technical Specification changes for this trip and have concluded that such changes are not required.

The MFP trip terminates feedwater flow when the water level in the reactor vessel is higher than the normally anticipated operational band and lower than the steam line nozzles. The MFP trip may be encountered during the level transient following a reactor scram or upon the failure of the feedwater controller, whereby feedwater regulation valves move to their fully open positions. The feedwater controller failure event is described in Pilgrim's Updated Final Safety Analysis Report (Appendix G, Event 36). Event 36 occurs when feedwater controller failure maximum demand leads to an excess of coolant inventory. When operating, any adverse responses of the reactor caused by cooling of the moderator is compensated by a scram accomplished through the combined actions of the Neutron Monitoring Reactor Protection and Control Rod Drive Systems. When pressure relief is required it is achieved through the operation of the Nuclear System Pressure Relief System. As can be seen, protection from the adverse effects of cooling the moderator is provided by scrams and the pressure relief system, not directly by the MFP trip (which is not credited in the accident analysis). The purpose of the MFP trip is to prevent turbine damage due to excessive moisture carryover, and to prevent water intrusion into the steam lines, protecting the main turbine and steamlines. It can therefore be seen that this trip is a plant design feature incorporated to protect equipment, but has no nuclear safety-related function.

070050

9411070202 941003
PDR ADCK 05000293
F PDR

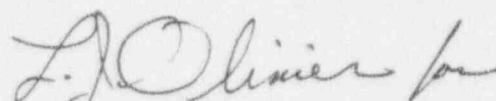
ADD 1/0

Technical Specifications are to impose conditions on or limit reactor operation to prevent or minimize the possibility of an event that could pose an immediate threat to public health and safety. The Staff's Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors dated July 22, 1993 established a specific set of objective criteria as guidance for determining which regulatory requirements and operating restrictions should be included in the Technical Specifications.

The MFP trip is not credited for fuel protection in any design basis accident or abnormal operational transient described in Pilgrim's Updated Final Safety Analysis Report. Therefore, the MFP trip does not satisfy NRC inclusion criteria and should not be added to the Technical Specifications.

Furthermore, Technical Specification requirements for the MFP trip are also not necessary because Pilgrim has procedural requirements to periodically verify availability and functionality of the MFP trip, and the MFP trip is included in Pilgrim's Master Surveillance Tracking Program. Hence, the MFP trip is tested and there would be no increase in equipment reliability resulting from adding it to Technical Specifications. In addition, Pilgrim's operating procedures include steps to prevent reactor vessel overfill events and steps to mitigate reactor vessel overfill events should they occur.

For these reasons, Pilgrim will not be adding Technical Specification requirements for the MFP trip. We also believe we have satisfied the requirements of GL 89-19 and, therefore, it should be closed for Pilgrim.


E. T. Boulette, PhD

ETB/PMK/nas/TS/Feedwtr

Attachment

cc: Mr. R. Eaton, Project Manager
Division of Reactor Projects - I/II
Mail Stop: 14D1
U. S. Nuclear Regulatory Commission
1 White Flint North
11555 Rockville Pike
Rockville, MD 20852

U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector
Pilgrim Nuclear Power Station