



ATTACHMENT TO UPDATE LER 81-055/01X-1

PREVIOUS REPORT ISSUED 10/15/81

- References: (a) BECo Letter No. 82-27, dated January 28, 1982 entitled "Evaluation of High Drywell Temperatures at Pilgrim Nuclear Power Station."
- (b) Attachment to the above letter entitled "Safety Evaluation Report for the Drywell Event"

Event Description

On September 26, 1981, at 0046 hours, a routine reactor shutdown and cool-down commenced. At 0600 hours, shutdown cooling was initiated. Reactor pressure was essentially atmospheric with temperature of the moderator approximately 220°F. At 0630 hours, oscillations of the Yarway level instrumentation started. Some GEMAC level instrumentation also showed oscillation, but with a much smaller excursion rate. The cooldown rate at this time was approximately 15° per hour. The first oscillation caused high level isolation followed by low level scram. This sequence occurred three (3) more times at about twenty (20) minute intervals.

Following the initial oscillation, the Watch Engineer requested an isolation verification and a survey to determine any loss of coolant inventory (drywell sump high alarms, torus level change, etc.). A check was also made of the drywell and coolant inventory, the drywell temperature at the 81' elevation was 240°F and the coolant temperature was 220°F. At the time of initial oscillation, the water level was concluded to be normal. The recirculation pumps were operating, the 0-400 level indication showed no oscillation.

Therefore, since there were no pipe breaks or radioactive releases and all systems functioned as required resulting from the sensed level indications, it has been determined that during this event, no threat was posed to the public health and safety.

Cause and Correction

The original cause determination of high drywell temperature due to an ineffective ventilation system has not been changed. The previously scheduled outage tasks which return the ventilation system to original configuration have been completed.

The following is an excerpt from reference item (a) describing proposed actions being investigated.

"... we are evaluating various hardware and/or software alternatives such as:

- (1) New emergency procedures to recognize the effect of "flashing";
- (2) Additional instrumentation to provide operations with reliable information on the status of the reference legs; and
- (3) Rerouting of the reference leg piping to reduce the vertical drop inside the drywell."

In the summary of the SER (Item b) the following conclusions from the investigation of this event are presented.

- "1. Elevated drywell temperatures did not adversely affect FSAR Chapter 14 or Amendment 20 analyses.
2. Neither the steel liner nor concrete structure of the drywell was significantly affected by the elevated drywell temperatures.
3. Safety functions of drywell components required for plant shutdown, accident mitigation, and transient response were not jeopardized.
4. A detailed analysis of temperature effects on drywell components is presented on a component-by-component basis."

In addition, Appendix L of the FSAR was reviewed in relation to the drywell event. Information received from Bechtel Corp. concluded that stress allowances are still valid and that the condition of the drywell at 250°F is enveloped by the appendix L results.

Boston Edison is continuing to discuss this event with the Office of Nuclear Reactor Regulation regarding other corrective actions due to possible generic implications.