

BOSTON EDISON COMPANY
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January 28, 1982

BECo Ltr. #82-27

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

Evaluation of High Drywell Temperatures
At Pilgrim Nuclear Power Station

Reference (a) December 18, 1981 Meeting at NRC Offices with
BECo to discuss torus gouges, high drywell
temperatures, and SRV test results

Dear Sir:

One of the action items resulting from the referenced meeting was for Boston Edison Company to provide you with an evaluation of the high drywell temperatures experienced at Pilgrim Nuclear Power Station and assess the effect this high temperature had on reactor water level instrumentation as well as other systems and equipment necessary for safe operation.

The enclosed report provides this information and serves as the basis for our determination that return to power is justified and that Pilgrim Station had operated safely during the previous cycle.

Since it was evident early in the startup testing at Pilgrim, that the upper elevation of the drywell exceeded maximum design temperatures, Boston Edison required the prime contractors, Bechtel and General Electric, to reevaluate the drywell duct work design, and the bases for FSAR drywell temperature limits. An investigation into the basis for this criterion showed it to be too restrictive and a new criterion was issued. This new criterion was met at all pre-operational power level testing.

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With regard to the effect of high drywell temperatures on ECCS initiation, Boston Edison has considered the impact of the most limiting LOCA both prior to and after SIL 299 calibration adjustments were made at Pilgrim.

The enclosed report evaluates the reactor level measurement errors specific to operation over Cycle #5. These results (with additional level error corrections) can also be applied to all operation prior to Cycle #5.

This consideration leads to the conclusion that ECCS initiation would have occurred both before and after SIL 299 calibration adjustments and that the consequences of possible deviations from technical specification limits would have negligible effects on our FSAR Chapter 14 and Amendment 20 Safety Analyses and subsequent LOCA analysis submittal. (Ref. LER #80-032/01T-0)

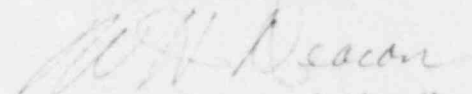
We are also aware of the potential effect of "flashing" of the reference legs under certain hypothesized accident scenarios. Therefore, as part of our long-term program to address this concern, we are evaluating various hardware and/or software alternatives such as:

- (1) New emergency procedures to recognize the effect of "flashing";
- (2) additional instrumentation to provide operators 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.

A draft proposed Technical Specification Amendment for Drywell Temperature Limits is currently being subjected to internal committee review and will be submitted to your office when complete.

Realizing your review of the attached evaluation may bring about new questions or concerns, we are fully prepared to provide you with additional information or clarifications as required. This can be accomplished via telecon or via additional meetings at your offices. Please do not hesitate to contact us in this regard.

Very truly yours,



W. H. Deacon, Acting Manager
Nuclear Operations Support
Department

attachment