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APR 11 1984

Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Docket Nos: 50-352
50-353

Subject: Limerick Generating Station, Units 1 and 2
Risk Assessment

Reference: Meeting between NRC Staff and Philadelphia Electric on March 30, 1984

Dear Mr. Schwencer:

At the reference meeting Mr. F. Rowsome informed us that the NRC Staff is writing a report summarizing the Staff's inquiry into the risk associated with Limerick. Mr. Rowsome invited Philadelphia Electric to provide comments by April 20, 1984, on the topics discussed at the reference meeting so that adequate time would be available to incorporate the comments.

Therefore, with regards to the insights you have gained from your review of the probablistic risk assessment and the suggestions proposed for consideration at the reference meeting, we offer the following:

1. Reactor Manual Depressurization

The importance of manually depressurizing the reactor for certain transient and accident events has been recognized in the Limerick Transient Response Implementation Plan (T.R.I.P.) Procedures. Within these procedures explicit instructions are provided to the operator to tell him under what conditions manual depressurization is required and to provide appropriate guidance on performing this depressurization. The operators have received extensive training in the use of these procedures on the Limerick simulator.

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The low probability events for which manual depressurization is required are transients and accidents that do not directly provide a high drywell pressure signal and which are further degraded by a loss of all high pressure make up systems. These events are slow developing, well understood transients which allow the operator sufficient time (at least 30 to 40 minutes on a worst case basis) to take the appropriate actions. Thus, we consider the current design to be adequate.

However, in response to NUREG-0737, Item II.K.3.18 we have committed to more fully automate the depressurization function such that manual depressurization will no longer be required for these events. This will be accomplished by adding a bypass timer to the ADS logic such that the high drywell pressure initiation signal will no longer be required in the presence of a sustained reactor low water level signal. Also included in this design is the addition of an ADS manual inhibit feature to facilitate override of the ADS logic for events where depressurization is not warranted. Specific instructions will be included in the trip procedures on the use of this feature.

In recognition of the Staff's view of the importance of this item, we have agreed to implement these changes on an accelerated schedule such that these modifications will be in place prior to fuel load.

2. HPCI/RCIC Room Cooling

In the analysis of the loss of offsite power initiator in the Limerick PRA, the various dependencies of the HPCI and RCIC systems were considered. One of the dominant contributors to the unavailability of these systems for a loss of offsite power event is the failure of the diesel generators to supply power. For this low probability event, the HPCI and RCIC systems would continue to operate off their DC power supplies, however, room cooling for the HPCI and RCIC compartments would be lost.

In recognition of the dependencies of these systems on the cooling function, preliminary calculations were performed to demonstrate that natural circulation cooling could be established by opening the compartment doors such that the time available to repair the diesels or restore offsite power is significantly increased. The analysis demonstrated the effectiveness of this alternate cooling method without the need for forced circulation.

We are currently in the process of developing the necessary procedures to mitigate this type of event and as part of this effort will review the original calculations to verify that the conclusions are still valid and that forced circulation is not required.

3. Containment Sprays

The importance of this function of the residual heat removal system has been recognized by the industry in the development of the Emergency Procedure Guidelines. The Limerick T.R.I.P. Procedures make extensive use of the containment sprays within the Containment Control Guidelines to limit pressure in both the drywell and the wetwell. Given the extensive operator training in these procedures, proper operation of the system to delay or prevent containment failure is assured.

The availability of the containment sprays is assured by demonstrating its operability through periodic testing. Many of the components required to function in the containment spray mode of the RHR system are also required to function in its shutdown cooling, suppression pool cooling and low pressure injection modes. A review of the surveillance testing requirements for the RHR system indicates that operability of the containment spray mode is demonstrated approximately once a month.

Philadelphia Electric is pleased to provide this information. Mr. J. Phillabaum has coordinated this effort for us and should be contacted at (215)841-4766 if clarification or additional discussion of the subject is desired.

Sincerely,

John S. Kemper

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