Docket No. 50-352/353

Mr. Edward G. Bauer, Jr.
Vice President & General Counsel
Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Dear Mr. Bauer:

SUBJECT: Request for Additional Information -
(Mechanical Engineering Branch Limerick Review Issues)

The staff has reviewed several responses provided subsequent to the issuance of the Limerick SER Supplement No. 1 and has determined that some areas in the responses have not been addressed adequately. These items include 1) startup test specification for BOP piping, 2) suppression pool hydrodynamic load reconciliation, 3) pressure isolation valves leak testing and 4) stiff clamps.

Please provide us with the date(s) on which you plan to respond to the above. Any questions concerning this information request should be directed to Mr. Robert E. Martin, the licensing project manager.

Sincerely,

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

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MECHANICAL ENGINEERING BRANCH

REQUEST FOR ADDITIONAL INFORMATION

1. SER Confirmatory Issue # 3 - Startup Test Specification for BOP Piping

The response to MEB SER Question [illegible].58 concerning the startup test specification for BOP piping as contained in FSAR, Revision 28 stated that interim test specifications governing the scope of startup testing of BOP piping have been prepared and will be made available to the NRC for review when requested. Provide the staff a copy of the interim test specifications.

2. SER Confirmatory Issue # 5 - Suppression Pool Hydrodynamic Load Reconciliation

The response to MEB Question 210.69, suppression pool hydrodynamic load reconciliation, as contained in FSAR Revision 27 stated that Section 3.9 has been changed to provide the New Loads Adequacy Evaluation. Based on a review of the information provided in FSAR Section 3.9, Revision 27 and the Design Assessment (DAR) of Limerick, we have determined that the following areas are incomplete.

a. Provide additional information to clearly define the scope of the suppression pool hydrodynamic load reconciliation program for Limerick. Specifically, clarify the statement in Section 7.2.1.10 of DAR, Revision 5 that "as described in Section 7.1.5, all seismic Category I BOP piping systems located inside the containment, reactor enclosure and control structure are analyzed for seismic and hydrodynamic loads " and the statement in Section 7.2.1.11 of DAR, Revision 8 that, "all seismic Category I BOP equipment is re-assessed for hydrodynamic and seismic loads (Section 7.1.7)." Sections 7.1.5 and 7.1.7 only address the design assessment methodology and do not clearly define the scope of the design assessment program as to whether all of the BOP piping components, equipment and their supports have been included in the design assessment.

With respect to NSSS, Section 7.2.1.12 of DAR, Revision 5 stated that NSSS piping and safety-related equipment have been assessed for hydrodynamic and seismic loads. It is not clear whether all of the NSSS piping components, equipment and their supports have been included in the design assessment. It is the staff's position that all safety-related BOP and NSSS piping components, equipment and their supports affected by the hydrodynamic load, both inside and outside containment have to be re-assessed in the hydrodynamic load reconciliation program. Provide a commitment to comply with this position. Indicate the methods

employed for the design re-assessment program such as actual reanalysis or spectra comparison.

b. Provide additional information to clearly identify the status and the results of the design re-assessment for suppression pool hydrodynamic loads. Specifically, identify whether changes in design such as additional supports, modification of existing supports or any other plant modifications are required as a result of the suppression pool hydrodynamic load reconcilation and provide a commitment and schedule of completion of design changes for all the affected safety-related piping components, equipment and their supports for both BOP and NSSS. Currently, FSAR Section 3.9, Revision 27 and Sections 7.2.1.11 and 7.2.1.12 of DAR, Revision 8 do not contain this information and Section 7.2.1.10 of DAR, Revision 5 does not address the status of implementation of design changes.

3. SER Confirmatory Issue #6 - Pressure Isolation Valves Leak Testing

The Surveillance Requirement pertaining to leak testing of pressure isolation valves (PIVs) presented in Section 4.4.3.2.2 of Limerick Draft Technical Specification is not complete. In addition to the two requirements currently identified in Limerick draft Technical Specification, Section 4.4.3.2.2, the staff requires the PIVs to be leak tested (a) prior to entering the Hot Shutdown whenever the plant has been in Cold Shutdown for 72 hours or more and if leakage testing has not been performed in the previous 9 months and (b) within 24 hours following valve actuation due to automatic or manual action or flow through the valve. Provide additional information to assure that the Limerick plant has the following plant features: (1) full closure of PIV's is verified in the control room by direct monitoring position indicators, (2) inadvertent opening of PIV's is prevented by interlocks which require the primary system pressure to be below subsystem design pressure prior to openings, and (3) gross intersystem leakages into the low-pressure core spray, residual heat removal/low-pressure coolant injection, and residual heat removal/shutdown cooling return and suction lines would be detected by high-pressure alarms and increases in the suppression pool level. With these plant features in place, the PIV's are controlled and verified continuously rather than at the intervals specified in (a) and (b) above and then, the exception for relief from the surveillance requirements (a) and (b) could be accepted.

4. SER Open Issue #29 - Stiff Pipe Clamps

For all safety-related piping in the NSSS and BOP scope, identify all locations where stiff pipe clamps are used (Ref. IE Information Notice, No. 83-80, Use of Specialized Stiff Pipe Clamps). Indicate whether or not stiff clamps are located at or near welds on elbows. For those stiff clamps located at or near welds on elbows, provide

information to assure that the effects of the clamp-induced pipe loadings have been adequately considered in the Limerick piping design and show that the calculated piping stresses for these situations are within applicable code allowables. The information on E-System pipe clamps for the core spray line and feedwater line provided in the letter from J. Kemper to R. Purple dated May 4, 1983 is acceptable. In addition, for such clamps, we will require a commitment to ensure post-installation control of the clamp preload.