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PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4502

JOHN S. KEMPER
VICE-PRESIDENT
ENGINEERING AND RESEARCH

MAR 26 1984

Mr. A. Schwencer, Chief
Licensing Branch No. 2
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Limerick Generating Station
Design Verification Program -
Limerick Unit 1

References:
1. Letter from NRC - D. G. Eisenhut to PECO - E. G. Bauer, Jr. dated January 10, 1984.
2. Telecon between NRC - A. Schwencer and R. E. Martin and PECO - J. T. Robb on February 15, 1984.

Dear Mr. Schwencer:

The reference 1 letter stated "....the NRC staff has been seeking additional assurances from applicants for operating licenses that the design process used in constructing their plants has fully complied with NRC regulations and licensing commitments." It also requested that we "....present any plans (we) have for assuring that (Limerick) has been designed and constructed in accordance with the regulations and safety analysis report commitments."

Philadelphia Electric Company believes that Limerick has been and continues to be designed, constructed and tested in accordance with NRC regulations and our licensing commitments. Because the conduct of the project has involved Philadelphia Electric Company deeply in all aspects of design activities, we have developed confidence that we are building a safe, efficient plant which meets all applicable criteria. This confidence is based upon many factors including:

1. In-depth design and calculational reviews of all safety systems at Limerick by PECO responsible system engineers and managers.

2. Multiple detailed walkdowns of systems installed at the plant.

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3. The evaluation of the project by the Institute for Nuclear Power Operations.

4. The continuing NRC review of the Limerick project including nearly a decade of inspections at the site, the NRC operating license review of our application and the periodic Systematic Appraisal of Licensee Performance (SALP) reports.

5. The results of our ongoing Quality Assurance Program including a series of audits of the design control process.

At the same time, we realize that the additional assurance that would be gained would aid the licensing process in general if an Independent Design Verification Program (IDVP) were to be performed. Therefore, as discussed in the reference 2 telecon, we have elected to have an IDVP performed for Limerick. The purpose of this letter is to present briefly the proposed scope of our review, to inform you of our selection of a contractor to perform this review and to discuss the schedule for conduct of the review.

The objective of the IDVP is to provide an independent assessment of the adequacy of the design process used in the construction of Limerick. The review will achieve this objective by pursuing a two phased approach. First, a broad review of the design control process will be performed. This review will evaluate the adequacy of the design control process which has been applied to the design of the plant. The second phase will evaluate the application of the design control process to a selected system within the plant. This review will include an evaluation of the conformance of the final design with design criteria and licensing commitments. It will test the validity of the assumptions made and the methods used in the design process.

The following aspects of the design process applied to the system selected for the second phase of the IDVP will be reviewed: mechanical, electric power, control systems, structural and equipment qualification. The IDVP will also include a walkdown of the system as installed in the plant.

We have carefully considered to what system this second phase of the IDVP should be applied. The system selected must meet several criteria if the system reviewed is to be truly representative of the overall plant design. These include:

1. The design must be safety related.

2. The design must represent a cross section of technical disciplines.

3. The design must include interfaces between the architect engineer (Bechtel) the nuclear steam supplier (General Electric) and Philadelphia Electric company over a significant period of time.

4. The design should have undergone changes over the study period in order to fully evaluate the design control system.

After consideration of the objectives of the review and the criteria which the system selected for the second phase of the IDVP should meet, we have selected the primary components of the portions of the core spray system listed below as the subject of the review:

1. Loop A of the core spray system in the drywell from the reactor vessel to the outboard containment isolation valve.

2. Loop A of the core spray system in the reactor building, from the outboard containment isolation valve to the suppression pool penetration.

3. One core spray pump.

We have selected CYGNA Energy Services to perform the IDVP and have awarded a contract to them for the work. We believe CYGNA is well qualified to undertake a project of this scope. We anticipate that CYGNA's experience, independence and total responsibility for the conduct of the review will assure that the product of the review will be of substantial use to both the NRC and Philadelphia Electric Company in providing additional assurance of the adequacy of design and construction.

We are planning to proceed with the conduct of the IDVP as follows:

1. Develop the detailed program plan for presentation to the NRC staff.

2. Meet with the staff to review the program plan in detail and submit the program plan formally to the staff.

3. After receipt of the staff's written concurrence with the program plan, authorize CYGNA to begin the review as independent contractor.

We are currently meeting with CYGNA to establish the administrative procedures which will be followed during the review. CYGNA is developing the detailed program plan for the conduct of the IDVP so that the plan may be presented to the NRC as discussed above. The final report on the IDVP will be available for submission to the staff about 13 weeks after receiving your formal concurrence with the program plan.

We believe that CYGNA will be ready to present the program plan on or after April 12, 1984. We would appreciate your scheduling a meeting for the presentation so that the review can begin in a timely fashion. Please contact Mr. J. T. Robb to make arrangements for the meeting.

Sincerely,

John S. Kemper

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cc: See Attached Service List

cc: Judge Lawrence Brenner
Judge Peter A. Morris
Judge Richard F. Cole
Troy B. Conner, Jr., Esq.
Ann P. Hodgdon, Esq.
Mr. Frank R. Romano
Mr. Robert L. Anthony
Mr. Marvin I. Lewis
Charles W. Elliot, Esq.
Zori G. Ferkin, Esq.
Mr. Thomas Gerusky
Director, Penna. Emergency
Management Agency
Mr. Steven P. Hershey
Angus Love, Esq.
Mr. Joseph H. White, III
David Wersen, Esq.
Robert J. Sugarman, Esq.
Spence W. Perry, Esq.
Jay M. Gutierrez, Esq.
Atomic Safety & Licensing
Appeal Board
Atomic Safety & Licensing
Board Panel
Docket & Service Section
Martha W. Bush, Esq.
James Wiggins
Mr. Timothy R. S. Campbell
Phyllis Zitzer