UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEB 11 1985

Docket No. 50-354

Mr. R.L. Mittl, General Manager
Nuclear Assurance and Regulation
Public Service Electric and Gas Company
P.O. Box 570, T22A
Newark, New Jersey 07101

Dear Mr. Mittl:

SUBJECT: EQUIPMENT QUALIFICATION

In Section 3.10 of the Hope Creek Draft Safety Evaluation Report, a number of items relating to equipment qualification were identified as requiring further clarification. By letter dated August 20, 1984 (open item response 103), PSE&G provided point-by-point clarifications to those items. In reviewing the information provided in this letter, the staff has found that PSE&G's responses, from the point of view of the technical content, to be generally acceptable, with the exception of certain items which are discussed below:

Seismic and Dynamic Qualification

In the above mentioned letter, it is stated that vibration fatigue-cycle effects for NSSS equipment designed to ASME B&PV Code requirements were reviewed by NRC consultants from Battelle Pacific Northwest Laboratories at General Electric on October 7, 1980. Its was further stated that the consultants have expressed satisfaction with the General Electric approach, which encompasses OBE, SRV (where applicable), thermal, and pressure cycles. The documentation of the review results was not identified and the staff feels that it should be identified in the FSAR. With regard to the effects of other vibratory loadings, PSE&G stated that these are insignificant compared to seismic loads considered for equipment qualification. The staff feels that some quantitative assessments for the effects of in-plant dynamic loads will have to be conducted in order to be able to make such a generalized conclusion. For example, the effects of steam hammer, due to sudden valve closure, on the equipment qualification was not addressed but should be incorporated in the equipment qualification program.

It is also our position that a list of distinctive equipment types which clearly shows the methods used for qualification should be included in the pertinent sections of FSAR. The list should also address which standards are met, in particular those cited in SRP 3.10. Merely making references to the SQRT equipment master list or other lists is not acceptable.

Pump and Valve Operability Assurance

The concern about the list of equipment type and qualification methods as expressed under seismic qualification is applicable here for pump and valve operability assurance as well.

With regard to active valves subjected to hydrodynamic loads, it is not clear whether there are non-NSSS six-inch and smaller valves which have resonant frequencies higher than 33 Hz. If so, they should be included in Table 103-1 of the August 20, 1984 letter.

Finally, the extent to which draft standards ANSI/ASME QNPE-1 (N551.1), QNPE-2 (N551.2), QNPE-3 (N551.3), QNPE-4 (N551.4) and N41.6 and issued standard ANSI/ASME B.16.41 are used should not only be provided at the time of the audit but also be included in FSAR.

Based on the above evaluation, we request that PSE&G amend the FSAR to incorporate the responses provided in their letter of August 20, 1984, subject to the comments presented herein.

The staff's conclusion on the adequacy of PSE&G's overall qualification program can only be made after the SQRT and PVORT plant site audits. During the audits, the staff will review in detail the implementation of the qualification program to confirm that all applicable loads and combinations of loads have been defined, operability has been verified through appropriate tests and analyses, assemblies rather than individual components have been verified operable, and that for all safety-related equipment, operability can be assured through the plant life. The results of our continuing review of PSE&G's responses to the above stated staff concerns as well as the result of the site audits will be presented in a future supplement to the SER.

A. Schwencer

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

cc: See next page

Hope Creek

Mr. R. L. Mittl, General Manager
Nuclear Assurance & Regulation
Public Service Electric & Gas Company
P. O. Box 570 T22A
Newark, New Jersey 07101

cc:
Troy B. Conner, Jr. Esquire
Conner & Wetterhahn
1747 Pennsylvania Aveneu N.W.
Washington, D.C. 20006

Richard Fryling, Jr., Esquire
Associate General Solicitor
Public Service Electric & Gas Co.
P. O. Box 570 T5E
Newark, New Jersey 07101

Mr. R. Blough
Resident Inspector
U.S.N.R.C.
P. O. Box 241
Hancocks Bridge, New Jersey 08038

Richard F. Engel
Deputy Attorney General
Division of Law
Environmental Protection Section
Richard J. Hughes Justice Complex CN-112
Trenton, New Jersey 08625

Mr. Robert J. Touhey, Acting Director
DNREC - Division of Environmental Control
89 Kings Highway
P. O. Box 1401
Dover, Delaware 19903

Mr. R. S. Salvesen
General Manager-Hope Creek Operation
Public Service Electric & Gas Co.
P.O. Box A
Hancocks Bridge, New Jersey 08038

Mr. B. A. Preston
Project Licensing Manager
Public Service Electric & Gas Co.
P. O. Box 570 T22A
Newark, New Jersey 07101

Susan C. Remis
Division of Public Interest Advocacy
New Jersey State Department of
the Public Advocate
Richard J. Hughes Justice Complex
CN-850
Trenton, New Jersey 08625

Gregory Minor
Richard Hubbard
Dale Bidenbauh
MHB Technical Associates
1723 Hamilton Avenue, Suite K
San Jose, California 95125

Office of Legal Counsel
Department of Natural Resources
and Environmental Control
89 Kings Highway
P.O. Box 1401
Dover, Delaware 19903

Mr. K. W. Burrowes, Project Engineer
Bechtel Power Corporation
50 Beale Street
P. O. Box 3965
San Francisco, California 94119

Mr. J. M. Ashley
Senior Licensing Engineer
c/o PSE&G Company
Bethesda Office Center, Suit 550
4520 East-West Highway
Bethesda, Maryland 20814

Mr. A. E. Giardino
Manager - Quality Assurance E&C
Public Service Electric & Gas Co.
P. O. Box A
Hancocks Bridge, New Jersey 08038

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