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Public Service Electric and Gas Company 80 Park Plaza Newark, N.J. 07101 201/430-8316

January 14, 1981

Mr. Boyce H. Grier, Director
U. S. Nuclear Regulatory Commission
Office Of Inspection and Enforcement
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Grier:

STRUCTURAL DESIGN DEFICIENCY
NO. 1 AND 2 UNITS (50-354/355)
HOPE CREEK GENERATING STATION

On December 17, 1980, a verbal report was made to Region 1, Office of Inspection and Enforcement representative, Mr. J. Mattia, advising of a potential significant item. The following information is submitted as required by 10CFR50.55(e).

1. Description of the deficiency:

During our Architect Engineer's review of all structural members for adequacy after actual equipment and piping loads are fully established, and as mandated by their general civil-structural design criteria, they concluded that several as-built bracket stiffener plates must be modified to satisfy existing design criteria.

This situation was discovered during the review of the slab supports for elevation 102' in the Unit #1 Reactor Building. Investigation has shown the problem exists in both the Unit #1 and Unit #2 Reactor Buildings, and in the Auxiliary Building.

The design method used was one presented in general civil-structural design criteria and was also as delineated in the American Institute of Steel Construction (AISC), "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings", dated February 12, 1969, with Supplement No. 1 of November 1, 1970, Supplement No. 2 of December 8, 1971, and Supplement No. 3 of June 12, 1974. The cause of the design problem was that although shear and compressive forces were considered, the effect of bending on bracket stiffener plates caused by load eccentricity was not considered.

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2. Analysis of safety implications:

An analysis of safety implications will be conducted following completion of a case-by-case review of all questionable beam seats which have already been installed.

3. Corrective Action:

Our A/E will determine and issue appropriate design requirements for construction. This work is presently in progress and will be completed by August 13, 1981. This will involve obtaining as-built data, preparing case-by-case repair requirements, and revising design requirements for beam seats to be constructed in the future.

Upon completion of the review of each suspect beam seat and analysis of the data concerning required repairs, we will submit a final report to the NRC. We expect to issue this report on or about August 31, 1981.

Very truly yours,

J Martin

CC: Office of Inspection & Enforcement
Division of Reactor Construction Inspection
Washington, D. C.

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