

Public Service  
Electric and Gas  
Company

Thomas J. Martin  
Vice President  
Engineering and Construction

80 Park Plaza, Newark, NJ 07101 201-430-8316 Mailing Address: P.O. Box 570, Newark, NJ 07101

May 2, 1983

Mr. James M. Allen, Acting Administrator  
U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region I  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Dear Mr. Allen:

SIGNIFICANT CONSTRUCTION DEFICIENCY  
WELD DEFECTS IN CLASS 1E CABINETS  
HOPE CREEK GENERATING STATION

On January 25, 1983, a verbal report was made to Region I, Office of Inspection and Enforcement representative, Mr. L. Tripp, advising of a potentially significant construction deficiency concerning defective spot welds in four Class 1E cabinet assemblies. On February 28, 1983, an interim report was sent to your office. The following additional information is provided in accordance with the requirements of 10CFR50.55(e).

#### Description of Deficiency

Bailey Controls Company has determined that the effective areas of the cabinet spot welds in question measured approximately 54% of that designed (i.e., 0.19 inches in diameter rather than 0.28 inches specified). The scope of the problem was limited to the four termination cabinet assemblies delivered to the Hope Creek jobsite and an additional eight digital cabinets so identified during fabrication.

#### Corrective Action

Bailey Controls Company has reworked all of the affected cabinets. Bechtel Power Corporation, our Architect/Engineer and Constructor, has performed shop inspection of the rework at the Bailey facility. The repaired cabinets have also been seismically requalified.

Since no additional cabinets remain to be fabricated by Systems Control Company of Iron Mountain, Michigan, for the Bailey purchase order, Bechtel has reviewed all other purchase orders for Class 1E enclosures to ensure that the

8305110255 830502  
PDR ADDCK 05000354  
S PDR

FE27

enclosure had been inspected at either the prime or the sub-supplier's location. These reviews indicated that adequate quality surveillance had been performed and documented in each instance.

Safety Analysis

Bechtel Project Engineering has evaluated the spot weld condition and concluded that there is sufficient design margin to preclude failure over the life of the plant. However, to provide conclusive evidence to that end would require either detailed model analysis simulating a SSE or extensive shaker table testing of prototype cabinets with and without defective spot welds. Given the criticality of the Class 1E circuits routed through the subject cabinets, the safety implications of a postulated failure of the enclosure include the failure of any of these circuits which would adversely affect safe operation/shutdown of the plant. We therefore consider this condition to be reportable in accordance with 10CFR50.55(e).

Very truly yours,



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

NRC Resident Inspector - Hope Creek  
P. O. Box 241  
Hancocks Bridge, NJ 08038