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September 28, 1984

Dr. Thomas E. Murley, Administrator
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

50-354

Dear Dr. Murley:

SIGNIFICANT CONSTRUCTION DEFICIENCY
DESIGN DEFICIENCY-UNDERRATED CABLE
HOPE CREEK GENERATING STATION

On July 20, 1984, a verbal report was made to Region I, Office of Inspection and Enforcement representative, Mr. E. C. McCabe, advising of a potentially significant construction deficiency concerning underrated electrical cable. On August 20, 1984, an interim report was submitted to your office. The following final report is provided in accordance with 10CFR50.55(e).

Description of the Deficiency

By letter dated March 19, 1984, our Architect/Engineer and Constructor, Bechtel, advised the Nuclear Regulatory Commission of a SNUPPS project design deficiency reportable under 10CFR21. The deficiency involves the specification of cable intended for use at conductor temperatures not exceeding 90°C for normal operation for the connection of Valcor solenoid valves, whereas calculated terminal block temperatures would dictate the use of cable rated for 150°C service. Bechtel has determined that this design deficiency applies to fourteen (14) Valcor solenoid valve connections in the Hope Creek Instrument Gas Compressor System. Bechtel issued Nonconformance Report No. 4522 to document and control the deficient valve connections.

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Corrective Action

Bechtel has issued Design Change Notice (DCN) No. 37 against drawing E-1408 providing for the replacement of the underrated cable with cable capable of withstanding the higher operating temperatures. Completion of this activity is scheduled for December 31, 1984.

Safety Analysis

Had the condition gone undetected and uncorrected, there would exist the potential for functional loss of the Instrument Gas Compressor System which, under certain accident modes, would impair our ability to maintain differential pressure between Containment Isolation Valves for the Main Steam Sealing System. Based upon the above analysis, we have determined that safe operation/shutdown of the plant could have been adversely affected had the condition gone uncorrected. We therefore consider this condition to be reportable in accordance with 10CFR50.55(e).

Very truly yours,

TJ Martin
RR Cast

C Office of Inspection and Enforcement
Division of Reactor Construction Inspection
Washington, D. C. 20555

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