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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
ANCHOR DARLING GLOBE VALVES
HOPE CREEK GENERATING STATION

On August 30, 1984, a verbal report was made to Region I. Office of Inspection and Enforcement representative, Mr. E. Kelly, advising of a significant construction deficiency concerning the potential loosening of anti-rotational collar setscrews in Anchor Darling globe valves. The following final report is provided in accordance with 10CFR50.55(e).

Description of the Deficiency

NRC Information Notice 83-70 identifies a potential problem with Anchor Darling globe valves with non-rotating stems. The valves are designed with a stem collar which prevents the stem from rotating. The stem collar is secured by one or more setscrews. If the setscrew(s) becomes loose, the stem collar will not prevent the stem from turning. This will result in the stem rotating in place rather than moving linearly, as required for the valve to operate. Our Architect/Engineer and Constructor, Bechtel, has identified eighty-six (86) Anchor Darling globe valves with non-rotating stems at the Hope Creek site.

Corrective Action

In accordance with Anchor Darling recommendations, the stem collar setscrews will be checked for tightness. QC verification of setscrew tightness will be documented on the individual installation records for fifty-nine (59) of the eighty-six (86) valves. This work will be completed by December 31, 1984.

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Bechtel Engineering has determined that the remaining twenty-seven (27) globe valves are installed in systems subject to steady state vibration. The setscrews on these valves will be locked in accordance with the manufacturer's recommendations. Verification of this corrective action will be documented on Nonconformance Report No. 4591. This work will be completed by November 9, 1984.

Safety Analysis

We have determined that had the stem collar setscrews become loose the valve would fail to open or close upon demand. Several cases exist where this failure could prevent the Emergency Core Cooling Systems from performing their function under accident conditions. Based upon the above analysis, it has been determined that safe operation/shutdown of the plant could have been adversely affected had the problem gone uncorrected. We therefore consider this condition to be reportable in accordance with 10CFR50.55(e).

Very truly yours,

TJ Martin
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