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July 18, 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

Dear Dr. Murley:

POTENTIAL CONSTRUCTION DEFICIENCY
DEFECTS IN LUBE OIL PUMP DISCHARGE NOZZLES
HOPE CREEK GENERATING STATION

On April 25, 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 regarding cracked bosses on our diesel generator lube oil pump discharge nozzles. On May 25, 1984, an interim report was submitted to your office. The following interim report is provided in accordance with 10CFR50.55(e).

Description of the Deficiency

Colt Industries submitted a Part 21 Report to Region III concerning a broken boss on a lube oil pump discharge nozzle discovered during factory testing of a diesel generating set. A second lube oil pump was examined and the boss area was found to be cracked.

Colt Industries concluded that the cracking or breaking was the result of overtightening of the tapered thread adapter which screws into the boss.

Our Architect/Engineer and Constructor, Bechtel, has inspected all four of the engine driven lube oil pump discharge nozzles on the Hope Creek diesel generators. The inspection revealed cracks and casting discrepancies at the boss connection and Nonconformance Report No. 3826 was issued to document and control the hardware.

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Safety Analysis

An evaluation was performed to determine the effect on safe operation of the plant. The failure of the discharge nozzle significantly reduces the sealing area between the nozzle and the threaded adapter. In addition, severe cracking or breaking of the discharge nozzle could permit oil leakage sufficient to prevent operation of the engine. We, therefore, consider this condition to be reportable in accordance with 10CFR50.55(e).

Corrective Action

Colt Industries concluded that the cracking or breaking was the result of overtightening of the tapered thread adapter which screws into the boss. Colt Industries advised that the design for the adapter is being changed to straight threads with an undercut to prevent recurrence of the problem.

Bechtel is currently coordinating with Colt Industries to provide for repair of the discharge nozzles and replacement of the threaded adapters. A schedule for completion of all necessary corrective actions will be provided by August 7, 1984, which will be reported at that time.

Very truly yours,

TJ Martin
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C Office of Inspection and Enforcement
Division of Reactor Construction Inspection
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