



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

February 19, 1992

Docket no. 50-354

Mr. Steven E. Miltenberger
Vice President and Chief Nuclear
Officer
Public Service Electric and Gas
Company
Post Office Box 236
Hancocks Bridge, New Jersey 08038

Dear Mr. Miltenberger:

SUBJECT: RESPONSE TO GENERIC LETTER 89-10, SUPPLEMENT 3, HOPE CREEK
GENERATING STATION (TAC NO. M77780)

By letters dated December 7, 1990, and March 8, 1991, you responded to Supplement 3 to GL 89-10 (Supplement 3) for the Hope Creek Generating Station (HCGS). The Nuclear Regulatory Commission staff (the staff) conducted an inspection July 15-19, 1991, of the program being developed at HCGS in response to GL 89-10 (Inspection Report 50-354/91-80). As part of that inspection, the staff evaluated your response to Supplement 3. Based on that inspection, you resubmitted a response to Supplement 3 on September 30, 1991. After reviewing that resubmittal, the staff has not identified any immediate concerns regarding the capability of the Motor Operated Valves (MOVs), within the scope of Supplement 3, to perform their design basis function to isolate containment in the event of a pipe break downstream of the valves.

However, your September 30, 1991 response indicated that High Pressure Coolant Injection (HPCI) MOVs F002 and F003 have their torque switches set below the Limitorque recommended thrust values. You should verify the capability of these MOVs to perform their design basis functions. This verification should include an evaluation of the accuracy of your diagnostic equipment. These evaluations should be performed in accordance with the schedule in Supplement 3. You are requested to inform the staff when your re-evaluation is complete and available for staff review. Regarding all other MOVs within the scope of Supplement 3, the staff considers it appropriate for you to address those MOVs as part of your GL 89-10 program and schedule, unless further information dictates accelerated action.

Among the aspects that your MOV program should address are: (1) the structural limits of each MOV in light of the increased thrust and torque requirements based on industry experience and research testing, (2) the reduction in thrust delivered by the actuator that may occur as a result of the "rate of loading" phenomenon, (3) the reduction of motor output that may occur as a result of high ambient temperature, (4) the capability of the valves to satisfy any leakage limits associated with your safety analyses when closing under design basis conditions (particularly where the torque switch is set assuming low valve factors, but is bypassed for a significant portion of the valve stroke), (5) the justification for the assumed stem friction

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coefficient, (6) the justification for the assumed differential pressure under which the MOVs may be called upon to operate in light of the intent of GL 89-10, (7) the inaccuracy of MOV diagnostic equipment in measuring delivered torque or thrust, (8) the assumed minimum voltage available to the motor as compared to the licensing commitments, and (9) the closing stroke time under design basis conditions in relation to technical specifications or safety analyses (particularly for dc motors).

In addition to your own MOV tests, you will be expected to monitor the MOV tests performed by other organizations for information on the torque and thrust required to operate MOVs under design basis conditions. You will be expected to take action to ensure MOV operability when tests raise questions regarding the required torque or thrust estimates. With respect to the review of the NRC-sponsored MOV tests by the Electric Power Research Institute (EPRI), the NRC staff agrees with the evaluation by the Idaho National Engineering Laboratory (INEL) provided in EGG-SSRE-9926 (November 12, 1991), "Evaluation of EPRI Draft Report NP-9926 - Review of NRC/INEL Gate Valve Test Program."

During inspections of the GL 89-10 program, the NRC staff will confirm your assumptions and calculations for MOVs within the scope of Supplement 3 as well as the other MOVs within the scope of GL 89-10.

This requirement affects fewer than 10 respondents and, therefore, is not subject to Office of Management and Budget review under P.L. 96-511.

Sincerely,

/s/

Stephen Dembek, Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

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Sincerely,



Stephen Dembek, Project Manager
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Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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Hope Creek Generating Station

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