

NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
HOLYOKE WATER POWER COMPANY
NORTHEAST UTILITIES SERVICE COMPANY
NORTHEAST NUCLEAR ENERGY COMPANY

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March 28, 1983

Docket No. 50-423
AEC-MP3-304
B10729

Mr. Ronald C. Haynes
Region I
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 10406

- References:
- (1) W. G. Counsil letter to B. H. Grier, Reporting of Potential Significant Deficiencies in Design and Construction, dated June 14, 1980.
 - (2) W. G. Counsil letter to R. C. Haynes, Reporting of Potential Significant Deficiencies in Design and Construction, Interim Report; Minimum Charging Pump Flow, dated February 16, 1982.
 - (3) W. G. Counsil letter to R. C. Haynes, Reporting of Potential Significant Deficiencies in Design and Construction, Interim Report; Minimum Charging Pump Flow dated June 9, 1982.

Gentlemen:

Millstone Nuclear Power Station, Unit No. 3
Final Report in the Reporting of a
Potential Significant Deficiency in Design;
Minimum Charging Pump Flow (SD-8)

As required by Title 10, Code of Federal Regulations Part 50, Paragraph 55(e), Northeast Nuclear Energy Company (NNECO) reported a potential significant deficiency in the design of Millstone Unit No. 3 in Reference (1). Reference (2) stated that after detailed evaluations by both Northeast Utilities Service Company (NUSCO) and Westinghouse it was concluded that for the case of a steam line or feedwater line break, concurrent with a loss of offsite power, adequate charging pump flow would be provided by the safety grade PORV's used on Millstone Unit No. 3. Reference (3) stated that we were evaluating two possible solutions to ensure minimum flow of the charging pumps:

- (a) Upgrading the automatic actuation of the PORV's to safety grade, since the PORV's are only safety grade for manual mode. or
- (b) Modifying the recirculation flow path to accomplish minimum pump flow.

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NNECO has opted for the latter and has accepted a proposal by Westinghouse to modify the charging pump miniflow system.

The proposed system modification provides two alternate miniflow paths which are made available to protect the operable charging pumps whenever an engineered safeguards system(s) actuation signal is present and the normal miniflow path is isolated. The auxiliary miniflow path will be placed in service, any time the "S" actuation signal is present, by the automatic opening of the one upstream motor operated isolation valve which is normally closed. Power to this valve is supplied by the same electric power train as the charging pump it is protecting.

A relief valve is provided in each alternate miniflow path with a set pressure established to prevent the charging pump from reaching a deadhead condition. The capacity of the relief valve is selected to provide at least the required minimum flow of 60 gpm for each charging pump when the injection flow into the RCS is zero. If the reactor coolant pressure subsequently decreases, due to the processes imposed on the reactor coolant system, the relief valve will reclose as the charging pump flow is again directed into the RCS. The auxiliary miniflow line will remain in service to relieve the pump flow should the reactor coolant pressure again increase before the reactor operator regains control of the plant.

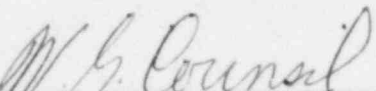
After the operator has diagnosed the initiating event and has ensured that the requirements for termination of safety injection have been met, the charging pump subsystem can be realigned for normal operation.

By incorporating this improved charging pump miniflow system modification, we consider the reported significant deficiency to be resolved.

This letter constitutes our final report closing out all items related to SD-8. We trust the above information satisfactorily responds to your concerns, however, if you should have any further questions, feel free to contact us.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



W. G. Council
Senior Vice President