NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

May 16, 1984
(NMP2L 0056)

Mr. R. W. Starostecki, Director
U.S. Nuclear Regulatory Commission
Region I
Division of Project and Resident Programs
631 Park Avenue
King of Prussia, PA 19406

Re: Nine Mile Point Unit 2
Docket No. 50-410

Dear Mr. Starostecki:

Enclosed is a final report in accordance with 10CFR50.55(e) for the problem concerning backpressure on valves furnished by Clow Corporation (55(e)-84-10). This problem was reported in a telephone conversation between Mr. T. Loomis (Nine Mile Point Unit 2 Licensing) and Mr. S. Collins of your staff on February 16, 1984. An interim report was submitted via our letter dated March 21, 1984.

Very truly yours,

C. V. Mangan
Vice President
Nuclear Engineering & Licensing

CVM/TL:ja
Enclosure
xc: Director of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

R. A. Gramm, Resident Inspector

NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT - UNIT 2
DOCKET NO. 50-410

Final Report for a Problem
Concerning Backpressure
on Valves Furnished by Clow Corporation

Description of the Problem

The problem pertains to the tricentric valves furnished by Clow Corporation. These valves were designed based on the maximum differential pressures applied in the normal flow (to-seat) direction. A review of design criteria indicates that some of these valves could be subject to backpressure under certain plant conditions. Backpressure was not a design criterion in the design of these valves.

Analysis of Safety Implications

The Niagara Mohawk architect/engineer (Stone & Webster Engineering Corporation) performed a review of all systems containing Clow valves to determine which valves were susceptible to backpressure. This information was forwarded to Clow where a computer analysis was performed for every valve. The analysis indicated that stress levels could exceed ASME Code allowables for certain valves when exposed to prescribed backpressures. It also was concluded that although ASME stress levels would be exceeded, no permanent deformation of valve materials or valve damage would occur. It was concluded that the only noticeable effect resulting from backpressurization would be increased leakage in the reverse direction. With the exception of two valves, 2RHS*MOV1A and 1B, it was determined that the leakage would be contained within the system and would not affect operability of any system. Valves 2RHS*MOV1A and 1B are RHR suppression pool suction valves, and leakage from these valves is directly to the suppression pool. In the worst case, the leakage would result in a low water level (low water level 3) signal that would automatically initiate the closing of isolation valves 2RHS*MOV112 and 2RHS*MOV113. The reactor water level would be restored by feedwater, high pressure core spray, low pressure core spray, etc., depending upon the reactor/plant conditions. Consequently, this deficiency would not have adversely affected the safe operation of the plant and would not be reportable under 10CFR50.55(e).

Corrective Actions

The following corrective actions have been taken to accommodate backpressure in the subject safety-related valves without exceeding ASME stress allowables:

1. Valves, Mark Nos. 2SWP*MOV3A and 3B and 2SWP*MOV50A and 50B, have been reworked with new shafts and keys.

2. Valves, Mark Nos. 2RHS*MOV1A and 1B, 2HRS*MOV9A and 9B, 2RHS*MOV12A and 12B, and 2HRS*MOV30A and 30B will be replaced with new valves.

3. Clow valves, listed below, in the low pressure core spray, residual heat removal, and service water systems will be reoriented and/or given special operating instructions:

2CSL*V121	2SWP*MOV93A&B
2RHS*MOV1C	2CSL*MOV112
2SWP*MOV74A,B,C,D,E&F	2CSL*HCV118
	2SWP*MOV92A&B

This action will be completed by October 31, 1984.