

**North
Atlantic**

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The Northeast Utilities System

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NYN-94106

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United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

- Reference:
- (a) Facility Operating License No. NPF-86, Docket No. 50-443
 - (b) New Hampshire Yankee letter NYN-90003 dated January 2, 1990, "Response to Generic Letter 89-10", T.C. Feigenbaum to USNRC
 - (c) New Hampshire Yankee letter NYN-920924 dated March 2, 1992, "Motor Operated Valve Grouping, Selection, and Exclusion Criteria for Differential Pressure Testing", T.C. Feigenbaum to USNRC
 - (d) New Hampshire Yankee letter NYN-92058 dated April 30, 1992, "Response to a Request for Additional Information", T.C. Feigenbaum to USNRC
 - (e) USNRC Inspection Report 94-11, "Seabrook Motor-Operated Valve Inspection"

Subject: Generic Letter 89-10, "Safety Related Motor-Operated Valve Testing and Surveillance"

Gentlemen:

North Atlantic Energy Service Corporation (North Atlantic) is committed to implementing a quality motor operated valve (MOV) program that ensures MOVs will operate under design basis conditions for the life of the plant and addresses the NRC guidance provided in Generic Letter 89-10, including its supplements. North Atlantic's current commitments regarding Generic Letter 89-10 are provided in Reference (b) and are further clarified in References (c) and (d).

Prior to Refueling Outage 03, which commenced on April 9, 1994, we had intended to complete the initial cycle of testing in accordance with our Generic Letter 89-10 MOV Program during the outage. However, the feedback from the NRC obtained during the MOV Inspection which occurred at the beginning of the outage [Reference (e)] indicated that our dynamic testing grouping methodology was deemed to be inconsistent with the guidance of Generic Letter 89-10, Supplement 6 (Supplement 6).

The grouping methodology for Seabrook Station's motor-operated valves was developed and submitted to the NRC prior to the NRC issuing the grouping guidance of Supplement 6 [Reference (c)]. The initial NRC review of the dynamic testing grouping methodology was performed during the MOV inspection. This review identified that additional valves would have to be tested and the valve grouping methodology would have to be revised to address the guidance of Supplement 6.

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During the MOV inspection we agreed that North Atlantic would not respond to Supplement 6 until a management meeting had been held to review all the open MOV issues. This meeting was originally proposed for late August but the extended refueling outage precluded this meeting from being held. It is our understanding that the meeting will be held after the NRC conducts the Region I MOV Workshop in October. North Atlantic is submitting this letter to clarify the status of our MOV program and completion commitments.

North Atlantic has reviewed Supplement 6 and is presently reviewing the Seabrook MOV program to revise the grouping methodology and address the guidance of Supplement 6. Based on this review, we have determined that MOVs can be placed in one of 33 groups vs 35 groups, as originally planned. This revised grouping will require the differential pressure testing of nine additional MOVs in order to fully implement the guidance of Supplement 6. North Atlantic has completed the design basis review, performed diagnostic testing, and set the MOV switch setpoints in accordance with the design basis calculations for all 122 MOVs in the Seabrook MOV program. In addition, we have included all position-changeable MOVs in the Seabrook program. Figure 1 lists the groups that currently have differential pressure testing completed in accordance with Supplement 6. The nine additional valves and their characteristics are listed in Figures 2 and 3. Figure 2 lists the four of these nine valves that can be tested during cycle 4 with the plant on line. Figure 3 lists the five of these nine valves that can only be tested when the plant is shutdown. Testing of three of these five valves can only be performed when the plant is in Mode 6. One of the remaining two valves requires Mode 3 and the other requires Mode 4. We will develop plans to test the two valves that require Mode 3/4 during cycle 4 if the required conditions become available because of a forced shutdown.

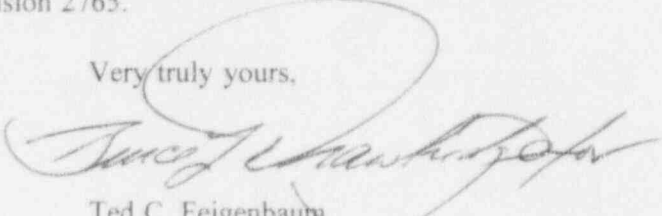
North Atlantic will complete the activities required to address Generic Letter 89-10, through Supplement 6 by the completion of Refueling Outage 04 which is currently scheduled to begin January 7, 1996. We are also reviewing our MOV testing data and the relevant industry data and will revise our program to incorporate the appropriate material prior to the next cycle of dynamic testing. In addition, should the plant experience an unscheduled outage during cycle 4 that has the appropriate conditions to safely accommodate testing of MOVs we will perform such testing in the time available in the outage schedule. North Atlantic will provide a completion report to the NRC within 30 days of Refueling Outage 04.

North Atlantic is monitoring NRC progress with Supplement 7 and will incorporate the applicable attributes into our MOV program. We will keep the NRC informed of any significant changes to our program as a result of Supplement 7, including a separate schedule for Supplement 7.

We look forward to discussing this issue and other issues identified in Inspection Report 94-11 during a meeting at your offices after the October Regional MOV Workshop.

Should you have any questions regarding this matter, please contact Mr. Terry L. Harpster, Director of Licensing Services, at (603) 474-9521, extension 2765.

Very truly yours,



Ted C. Feigenbaum

United States Nuclear Regulatory Commission
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TCF/JMP:sm

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FIGURE 1
COMPLETED MOV DP TEST GROUPS

DP TEST GRP	DESCRIPTION	NO TESTED	TOTAL	PERCENT	NOTES	TAG IDS
2	3 Westinghouse Gate SB-00 Limitorque Actuator Heavy Spring Pack 15 flb Motor	2	4	50%	None	1-CS-V-143 1-CS-V-142 1-RC-V-124 1-RC-V-122
5	4" Westinghouse Gate SB/SMB-00 Limitorque Actuator Heavy Spring Pack 15 flb Motor	4	7	57%	None	1-SI-V-114 1-SI-V-77 1-SI-V-139 1-SI-V-112 1-SI-V-111 1-SI-V-102 1-SI-V-138
7	6" Veian Gate SMB-0 Limitorque Actuator Heavy Spring Pack 25 flb Motor	1	2	50%	Although the percent completion for this group is 50% this is only a two valve group. The valve not tested in this group is a normally closed isolation valve in the crossconnect line between the startup feed pump and the emergency feedwater supply header. This valve is not required to open or close under differential pressure conditions. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed. The valve in this group that was tested under differential pressure conditions tested satisfactorily at near full design dP and line pressure.	1-FW-V-156 1-FW-V-163
8	6" Westinghouse Gate SMB-000 Limitorque Actuator Extra Heavy Spring Pack 10 flb Motor	1	1	100%	None	1-CBS-V-53
11	8" Westinghouse Gate SMB-0 Limitorque Actuator Heavy Spring Pack 25 flb Motor	2	2	100%	None	1-RH-V-70 1-RH-V-32
15	12" Westinghouse Gate SB-1 Limitorque Actuator Heavy Spring Pack 60 flb Motor	2	2	100%	None	1-CBS-V-5 1-CBS-V-2

FIGURE 1
COMPLETED MOV DP TEST GROUPS

DP TEST GRP	DESCRIPTION	NO TESTED	TOTAL	PERCENT	NOTES	TAG IDS
17	12" Velan Gate SB-1 Limitorque Actuator Light Spring Pack 40 flb Motor	1	2	50%	Although the percent completion for this group is 50% this is only a two valve group. Both valves in this group are auxiliary steam system high energy line break isolation valves. Differential pressure testing for the one valve tested simulated a line break by way of a test line open to atmosphere. The flow achieved was greater than 60,000 lbm/hr of 150 psig steam supplied by both auxiliary boilers. The valve successfully cut off the 60,000 lbm/hr flow with sizable margin. The valve stroke time is less than the time required for the volume of steam in the downstream header to expand out of the line break. The result is a much smaller differential pressure than was conservatively assumed for these valves. Additional differential pressure testing for the second valve would not produce meaningful test results. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed.	1-AS-V-176 1-AS-V-175
20	1" Yarway Angled Globe SMB-000 Limitorque Actuator Heavy/Extra Heavy Spring Pack 5 flb Motor	3	4	75%	None	1-MSD-V-44 1-MSD-V-45 1-MSD-V-46 1-MSD-V-47
26	4" Masoneilon Globe NA1 Rotork Actuator 11 Spring Pack 50 flb Motor	3	8	37.5%	None	1-FW-FV-4234B 1-FW-FV-4244A 1-FW-FV-4244B 1-FW-FV-4214B 1-FW-FV-4234A 1-FW-FV-4224B 1-FW-FV-4224A 1-FW-FV-4214A
28	4" Velan Globe SMB-00 Limitorque Actuator Heavy Spring Pack 10 flb Motor	2	2	100%	None	1-FW-V-347 1-FW-V-346

FIGURE 1
COMPLETED MOV DP TEST GROUPS

DP TEST GRP	DESCRIPTION	NO TESTED	TOTAL	PERCENT	NOTES	TAG IDS
29	6 Posi Seal Butterfly SMB-000 Limitorque Actuator Light Spring Pack 2 ftlb Motor	4	4	100%	None	1-CC-V-1101 1-CC-V-1092 1-CC-V-1109 1-CC-V-1095
31	14"&16" Posi Seal Butterfly SMB-000 Limitorque Actuator Light Spring Pack 5 ftlb Motor	3	4	75%	None	1-CC-V-272 1-CC-V-266 1-CC-V-145 1-CC-V-137
32	24" Fisher Butterfly SMB-0 Limitorque Actuator Light Spring Pack 15 ftlb Motor	13	20	65%	None	1-SW-V-31 1-SW-V-20 1-SW-V-19 1-SW-V-17 1-SW-V-140 1-SW-V-23 1-SW-V-29 1-SW-V-34 1-SW-V-22 1-SW-V-2 1-SW-V-139 1-SW-V-76 1-SW-V-27 1-SW-V-54 1-SW-V-55 1-SW-V-56 1-SW-V-74 1-SW-V-25 1-SW-V-15 1-SW-V-26

FIGURE 2
MOV DP TESTS DURING CYCLE 4 PRIOR TO 7/1/95

VALVE ID	DP TEST GRP	PRA	NAME	DESCRIPTION	DESIGN DATA	NOTES
1-CS-V-196	22	4 (low risk high dP)	Charging Pump 'A' Min Flow Isolation	2" Velan/Westinghouse Globe SMB-00 Limitorque Actuator Heavy Spring Pack 10 flb Motor	Design Valve Factor - Open = 1.103 Design Valve Factor - Close = 1.134 Design DP - Open = 2745 psig Design DP - Close = 2670 psig Design Flow = 60 gpm	This valve has low risk significance. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed.
1-CS-V-197	22	4 (low risk high dP)	Charging Pump 'B' Min Flow Isolation	2" Velan/Westinghouse Globe SMB-00 Limitorque Actuator Heavy Spring Pack 10 flb Motor	Design Valve Factor - Open = 1.103 Design Valve Factor - Close = 1.134 Design DP - Open = 2745 psig Design DP - Close = 2670 psig Design Flow = 60 gpm	This valve has low risk significance. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed.
1-RH-FCV-610	24	5 (low risk low dP)	RHR Pump 'A' Min Flow Control	3" Velan Globe SMB-00 Limitorque Actuator Extra Light Spring Pack 10 flb Motor	Design Valve Factor - Open = 1.1 Design Valve Factor - Close = 1.1 Design DP - Open = 202.7 psig Design DP - Close = 183.3 psig Design Flow = 600 gpm	This valve has low risk significance. The other valve in this test group has been satisfactorily tested under differential pressure conditions. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed.
1-SW-V-5	30	3 (high risk low dP)	SW Train 'B' Isolation To Secondary Loads	12" Fisher Butterfly SMB-00 Limitorque Actuator Extra Light Spring Pack 5 flb Motor	Design Valve Factor - Open = NA Design Valve Factor - Close = NA Design DP - Open = 132.6 psig Design DP - Close = 132.6 psig Design Flow = 2326 gpm	This valve has high risk significance but has low dP. The other valve in this test group has been satisfactorily tested under differential pressure conditions. 14 of 22 SW system butterfly valves have been dP tested, (63.6%) with no problems. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed.

FIGURE 3
MOV DP TESTS DURING OR04

VALVE ID	DP TEST GRP	PRA	NAME	DESCRIPTION	DESIGN DATA	NOTES
I-CS-V-149	01	3 (Low risk med dF)	Regen HX Outlet To Letdown HX	3" Westinghouse Gate SMB-000 Limitorque Actuator Extra Heavy Spring Pack 10 flb Motor	Design Valve Factor - Open = .5491 Design Valve Factor - Close = .6713 Design DP - Open = 600 psig Design DP - Close = 600 psig Design Flow = 120 gpm	The valve in this group is the regenerative heat exchanger isolation valve to the letdown heat exchanger. This valve will be tested during the fourth refueling outage. This valve has low risk significance. Baseline static diagnostic testing has been satisfactorily completed.
I-RH-V-22	09	6 (Low risk mis- pos only)	RHR Train 'A' Discharge Cross- Connect	8" Westinghouse Gate SMB-00 Limitorque Actuator Medium Spring Pack 25 flb Motor	Design Valve Factor - Open = .670 Design Valve Factor - Close = .736 Design DP - Open = 360.3 psig Design DP - Close = 253.4 psig Design Flow = 2362 gpm	The valves in this group are RHR isolation valves. One additional valve will be tested during the fourth refueling outage. The valves in this group have low risk significance. Baseline static diagnostic testing for all valves in this group has been satisfactorily completed.
I-RH-V-26	12	4 (Med risk low dP)	RHR Train 'B' To Cold Legs 3 And 4	8" Westinghouse Gate SB-1 Limitorque Actuator Heavy Spring Pack 60 flb Motor	Design Valve Factor - Open = .5381 Design Valve Factor - Close = .6103 Design DP - Open = 625 psig Design DP - Close = 190 psig Design Flow = 3500 gpm	This valve has medium risk significance but with low dP. The other valve in this test group has been tested under differential pressure conditions. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed.
I-RC-V-323	19	3 (Low risk high dP)	Reactor Head Vent Isolation	3/4" Velan Globe SMB-000 Limitorque Actuator Extra Light Spring Pack 2 flb Motor	Design Valve Factor - Open = 1.0 Design Valve Factor - Close = 1.1 Design DP - Open = 2595 psig Design DP - Close = 2595 psig Design Flow = < chg pump make up	The valve in this group is a reactor vessel head vent valve and has low risk significance. The valve is a normally closed globe valve in series with a normally closed solenoid operated globe valve both with pressure underneath the seat.
I-MS-V-206	25	6 (Low risk mis- pos only)	SG 'C' MSIV Bypass	3" Velan Globe SMB-00 Limitorque Actuator Extra Light Spring Pack 10 flb Motor	Design Valve Factor - Open = 1.68 Design Valve Factor - Close = 1.68 Design DP - Open = 1236 psig Design DP - Close = 1236 psig Design Flow = 109000 lbm/hr	This valve has low risk significance. The other valve in this test group has been tested under differential pressure conditions. Baseline static diagnostic testing for both valves in this group has been satisfactorily completed.