PSNH PUBLIC SERVICE
Company of New Hampshire

SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

August 23, 1982

SBN- 317
T.F. Q 2.2.2

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Resident and Project Inspection

References:
(a) Construction Permit CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
(b) PSNH Letter, dated November 13, 1981, "Response to IE Bulletin 81-02, Supplement 1, 'Failure of Gate-Type Valves to Close Against Differential Pressure'," W. P. Johnson to B. Grier
(c) PSNH Letter, dated July 17, 1981, "Reportable 10CFR50.55(e) Item 4" through 18" Motor-Operated Gate Valves Interim Report," J. DeVincentis to Office of Inspection and Enforcement
(d) PSNH Letter, dated May 1, 1981, "Reportable 10CFR50.55(e) Item - Westinghouse 3-Inch Motor-Operated Valves," J. DeVincentis to Office of Inspection and Enforcement

Subject: Final 10CFR50.55(e) Report; Westinghouse Motor-Operated Gate Valves (4-Inch to 18-Inch)

Dear Sir:

Reference (b) and (c) committed to providing a final report on the corrective modifications made on Westinghouse manufactured 4-inch to 18-inch motor-operated gate valves which have failed to tightly seal against differential pressure when tested at their service conditions or through analytical methods.

Reference (b) provided the following information for the subject valves scheduled to be utilized in Seabrook Station Unit 1 and Unit 2:

- Valve Function
- Valve Location Number
- W EMD Model Reference Number
- Maximum Delta P (psi) as Flow Approaches Zero
- Consequence of Failure to Close

IE27

I have attached Table 1 which provides the above information from Reference (b) and also includes the corrective modifications, if required.

Reference (d) provided the corrective modifications made to the 3-inch valves; however, two 3-inch valves were inadvertantly omitted. These valves and the corrective modifications are included in Table 1.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY

J. DeVincentis
Project Manager

TABLE 1

VALVE FUNCTION	VALVE LOCATION NUMBER	W EMD MODEL REFERENCE	MAXIMUM P (psi) AS FLOW APPROACHES ZERO EQUIP. SPEC	FINAL FUNCTIONAL REQUIREMENT	CONSEQUENCE OF FAILURE TO CLOSE	CORRECTIVE MODIFICATIONS
VCT Outlet	LCV-112B	4GM72FB	200	100	Two valves in series; failure of either valve to close reduces redundancy of providing isolation. Alternate valve will provide isolation.	Torque switch adjustment
VCT Outlet	LCV-112C	4GM72FB	200	100	Two valves in series; failure of either valve to close reduces redundancy of providing isolation. Alternate valve will provide isolation.	None required
RWST to Suction of CCPs	LCV-112D,E	8GM72FB	200	200	One MOV in each of two parallel paths from the RWST to suction of the CCPs failure reduces redundancy of providing isolation of RWST during the recirculation phase following a LOCA. Isolation will be provided by a check valve in series with the two paths.	Adjusted torque switch settings Changed gear ratio Changed torgue switch spring pack
RHR Suction Isolation, Inner	8701B	12GM88SE	700	700	Two valves in series; failure of inner isolation valve to close reduces redundancy of providing isolation. Isolation is provided by closing the outer valve.	Adjusted torque switch settings Changed gear ratio
	8702B	12GM88SE	700	700	Two valves in series; failure of inner isolation valve to close reduces redundancy of providing isolation. Isolation is provided by closing the outer valve.	Adjusted torque switch settings Changed gear ratio
RHR Suction Isolation, Inner	8701A	12GM88SE	700	700	Two valves in series; failure of outer isolation valve to close reduces redundancy of providing isolation. Isolation is provided by closing the inner valve.	Adjusted torque switch settings Changed gear ratio

TABLE 1

VALVE FUNCTION	VALVE LOCATION NUMBER	W EMD MODEL REFERENCE	MAXIMUM P (psi) AS FLOW APPROACHES ZERO: EQUIP. SPEC	MAXIMUM P (psi) AS FLOW APPROACHES ZERO: FINAL FUNCTIONAL REQUIREMENT	CONSEQUENCE OF FAILURE TO CLOSE	CORRECTIVE MODIFICATIONS
	8702A	12GM88SE	700	700	Two valves in series; failure of outer isolation valve to close reduces redundancy of providing isolation. Isolation is provided by closing the inner valve.	Adjusted torque switch settings Changed gear ratio
RHR Discharge Cross Connect	8716A,B	8GM74FE	700	300	Failure of valve to close reduces redundancy of providing low head train separation during CL recirculation phase following a LOCA. Train separation can be achieved by closing other valve.	Adjusted torque switch settings
RHR HX Discharge to CCP Suction	8804A	8GM74FE	700	300	Valve is opened for recirculation phase following a LOCA. Failure of valve to close precludes realignment of RHRS for normal operation.	Adjusted torque switch settings
RHR HX Discharge to SI Pump Suction	8804B	8GM74FE	700	300	Valve is opened for recirculation phase following a LOCA. Failure of valve to close precludes realignment of RHRS for normal operation.	Adjusted torque switch settings
RWST to SI Pump Suction	8806A,B	8GM72FB	200	200	Valve is closed for recirculation phase following a LOCA. If valve fails to close, backflow into RWST is prevented by check valve in line.	Adjusted torque switch settings Changed gear ratio Changed torque switch spring pack
CCP Suction to SI Pump Suction Crossover	8807A,B	6GM72FB	200	200	Two valves in parallel (8807A,B) in series with one valve (8924); failure of any one valve to close will not preclude isolation.	None required
	8924	6GM72FB	200	200	Two valves in parallel (8807A,B) in series with one valve (8924); failure of any one valve to close will not preclude isolation.	Adjusted torque switch settings Changed gear ratio Changed torque switch spring pack

TABLE 1

VALVE FUNCTION	VALVE LOCATION NUMBER	W EMD MODEL REFERENCE	MAXIMUM P (psi) AS FLOW APPROACHES ZERO EQUIP. SPEC	FINAL FUNCTIONAL REQUIREMENT	CONSEQUENCE OF FAILURE TO CLOSE	CORRECTIVE MODIFICATIONS
Accumulator Discharge	8808A,B,C,D	10GM88FN	2750	0	Valve is closed to prevent RCS pressurization during cold shutdown operations. If the valve fails to close, the accumulator may be depressurized by venting the N_2 to the containment.	None required
RHR Pump CL Injection	8809A,B	8GM78FN	2750	200	Valve is closed for switchover from CL to HL recirculation. Failure of valve to close will degrade flow to HLs.	None required
RWST to RHR Pump Suction	8812A,B	12GM74FE	700	100	Valve is closed for recirculation phase following a LOCA. If valve fails to close backflow into RWST is prevented by check valve in line.	None required
Sump Suction	8811A,B	16GM74FF	700	100	Valve is opened for recirculation following a LOCA. Valve would be closed for containment isolation. Valve is encapsulated within a protective housing which acts as the redundant containment isolation.	None required
SI Pump	8821A,B	4GM77FH	1500	1500	Valve is closed for switchover from CL to HL recirculation. If valve fails to close, Alternate Isolation Valve 8885 can be closed.	Adjusted torque switch settings Changed gear ratio Changed torque switch spring pack
RHR HX Discharge to HL	8840A,B	8GM78	700	200	Valve is closed for switchover from HL to CL recirculation following a LOCA. If valve fails to close, isolation is provided by closing the RHR discharge cross connect valves.	None required

TABLE 1

VALVE FUNCTION	VALVE LOCATION NUMBER	W EMD MODEL REFERENCE	MAXIMUM P (psi) AS FLOW APPROACHES ZERO: EQUIP. SPEC	MAXIMUM P (psi) AS FLOW APPROACHES ZERO: FINAL FUNCTIONAL REQUIREMENT	CONSEQUENCE OF FAILURE TO CLOSE	CORRECTIVE MODIFICATIONS
*Chg. Line Isolation	8105, 8106	3GM99	2750	2750	Two valves in series; failure of either valve to close reduces redundancy of providing isolation. Alternate valve will provide isolation.	Replace valves
*PORV Block	8000A, B	3GM99	2750	2500	Valve is closed to isolate a leaking or stuck open PORV. Failure of the valve to close could result in a small break LOCA. This accident is bounded by the analysis presented in Cahpter 15 of the FSAR.	Replace valves
*SI System	8923A, B	6GM72FB	200	200	Valves are closed to provide SI pump train separation. Two valves are present, failure of one valve to close will not preclude achieving separation.	Adjusted torque switch settings Changed gear ratio Changed torque switch spring pack
*Boron Injection Tank Isolation	8801A, B	4GM88FN	2750	0	Valves are designed to open to perform their safety function. Failure to close would delay returning system to normal valve line-up.	Adjusted torque switch settings Changed gear ratio
*Boron Injection Tank Isolation	8803A, B	4GM88FN	2750	0	Valves are designed to open to perform their safety function. Failure to close would delay returning system to normal valve line-up.	Adjusted torque switch settings Changed gear ratio

*Inadvertantly omitted from Reference (d)