



**WISCONSIN PUBLIC SERVICE CORPORATION**

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June 5, 1987

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

Docket 50-305  
Operating License DPR-43  
Kewaunee Nuclear Power Plant  
Response to Generic Letter 87-06

- References:
- 1) Letter from D. G. Eisenhut (NRC) to All LWR Licensees dated February 23, 1980
  - 2) Letter from E. R. Mathews (WPSC) to D. G. Eisenhut (NRC) dated March 18, 1980
  - 3) Letter from S. A. Varga (NRC) to E. R. Mathews (WPSC) dated April 20, 1981
  - 4) Letter from H. R. Denton (NRC) to All Holders of Operating Licenses dated March 13, 1987 (Generic Letter 87-06)

Your letter of February 23, 1980 (reference 1), identified a potential problem with system designs which utilize two check valves in series or two check valves in series with a motor operated valve which isolate the high pressure reactor coolant system from the low pressure injection system. The failure of these check valves is a significant contributor to risk from core melt accidents (Event V). You requested that we indicate if either of these valve configurations exist at the Kewaunee Nuclear Power Plant (KNPP).

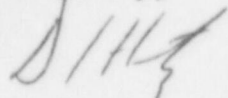
We responded in our letter of March 18, 1980 (reference 2), that one system (RHR/low pressure safety injection) utilizes the Event V design. You issued an Order for Modification of License (reference 3) which revised our Technical Specifications to include the primary coolant pressure isolation valves and the associated leakage testing requirements.

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In Generic Letter 87-06 (reference 4) you defined pressure isolation valves as any two normally closed valves in series within the reactor coolant pressure boundary which separate the high pressure reactor coolant system from an attached low pressure system. This definition expands the scope of the leakage program to include all pressure isolation valves regardless of the type or size. This letter provides our response to the NRC request put forth in Generic Letter 87-06. The attached table lists all the valves which meet the revised definition of pressure isolation valve. The table includes the periodic leakage and operational tests along with the frequency of testing.

Sincerely,



D. C. Hintz  
Vice President - Nuclear Power

PMF/jms

Attach.

cc - Mr. Robert Nelson, US NRC  
US NRC, Region III

Valve (Partner)	Drawing	Description	Leakage Test Procedure	Allowable Leakage	Operational Test Procedure	Test Freq. Leakage-Operation	Notes
SI-304A (303A)	X-K100-28	6" check, HPSI and LPSI to Rx. Vessel	SP34-203	≤5 GPM	SP55-167-9	CSD-REF	1,2,3,4
SI-304B (303B)	X-K100-28	6" check, HPSI and LPSI to Rx. vessel	SP34-203	≤5 GPM	SP55-167-9	CSD-REF	1,2,3,4
SI-303A (304A)	X-K100-28	6" check, LPSI to Rx. vessel	SP34-203	≤5 GPM	SP55-167-9	CSD-REF	1,2,3,4
SI-303B (304B)	X-K100-28	6" check, LPSI to Rx. vessel	SP34-203	≤5 GPM	SP55-167-9	CSD-REF	1,2,3,4
SI-22B (+)	X-K100-28	12" check, Accum. disch. to cold leg	SP33-204	≤5 GPM	SP33-144	CSD-CSD	1,2,3,4
RHR-11 (SI-22B)	X-K100-28	10" MOV, RHR to loop B cold leg	None	N/A	SP55-167-6	N/A-CSD	3,5
SI-21B (SI-22B)	X-K100-28	12" check, Accum. disch. stop valve	None	N/A	SP33-144	N/A-CSD	3
SI-22A (SI-21A)	X-K100-28	12" check, Accum. disch. to cold leg	None	N/A	SP33-144	N/A-CSD	3
SI-21A (SI-22A)	X-K100-28	12" check, Accum. disch. stop valve	None	N/A	SP33-144	N/A-CSD	3
RHR-1A (2A)	X-K100-18	8" MOV, RHR take-off from hot legs	None	N/A	SP55-167-6	N/A-CSD	3,5
RHR-1B (2B)	X-K100-18	8" MOV, RHR take-off from hot legs	None	N/A	SP55-167-6	N/A-CSD	3,5
RHR-2A (1A)	X-K100-18	8" MOV, RHR take-off from hot legs	None	N/A	SP55-167-6	N/A-CSD	3,5
RHR-2B (1B)	X-K100-18	8" MOV, RHR take-off from hot legs	None	N/A	SP55-167-6	N/A-CSD	3,5
RC-200A (201A)	X-K100-10	2" manual, RCS to RCDT	None	N/A	None	N/A	
RC-200B (201B)	X-K100-10	2" manual, RCS to RCDT	None	N/A	None	N/A	

Valve (Partner)	Drawing	Description	Leakage Test Procedure	Allowable Leakage	Operational Test Procedure	Test Freq. Leakage-Operation	Notes
RC-201A (200A)	X-K100-10	2" manual, RCS to RCDT	None	N/A	None	N/A	
RC-201B (200B)	X-K100-10	2" manual, RCS to RCDT	None	N/A	None	N/A	
PR-1A (2A)	X-K100-10	3" MOV, Prz. relief block valve	None	N/A	SP55-167-5	N/A-3 mos.	3,5
PR-1B (2B)	X-K100-10	3" MOV, Prz. relief block valve	None	N/A	SP55-167-5	N/A-3 mos.	3,5
PR-2A (1A)	X-K100-10	3" AOV, Prz. relief valve	None	N/A	SP55-167-9	N/A-REF	3
PR-2B (1B)	X-K100-10	3" AOV, Prz. relief valve	None	N/A	SP55-167-9	N/A-REF	3
LD-300 (301)	X-K100-35	1" AOV, Excess letdown hx inlet	None	N/A	None	N/A	
LD-301 (300)	X-K100-35	1" control, Excess letdown hx outlet	None	N/A	None	N/A	

Abbreviations: CSD - Cold Shutdown  
 REF - Refueling  
 MOV - Motor Operated Valve  
 AOV - Air Operated Valve  
 + - Valve has more than one partner



Notes: 1. From Table Tech Spec 3.1-2:

- a. Leakage rates less than or equal to 1.0 gpm are considered acceptable.
- b. Leakage rates greater than 1.0 gpm but less than or equal to 5.0 gpm are considered acceptable if the latest measured rate has not exceeded the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate of 5.0 gpm by 50% or greater.
- c. Leakage rates greater than 1.0 gpm but less than or equal to 5.0 gpm are considered unacceptable if the latest measured rate exceeded the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate of 5.0 gpm by 50% or greater.
- d. Leakage rates greater than 5.0 gpm are considered unacceptable.

2. From Table Tech Spec 3.1-2:

Minimum test differential pressure shall not be less than 150 psid.

3. All valves are stroke tested with the stopwatch starting on actuation and stopping upon control panel indicator illumination.
4. Surveillance testing of pressure isolation valves (From Tech Spec 4.2.3):
  - a. Periodic leakage testing on each valve shall be accomplished prior to entering the operating mode after every time the plant is placed in the cold shutdown condition for 72 hours if testing has not been accomplished in the preceding 9 months, and prior to returning the valve to service after maintenance, repair, or replacement work is performed.
  - b. Whenever integrity of a pressure isolation valve cannot be demonstrated, the integrity of the remaining pressure isolation valve in each high pressure line having a leakage valve shall be determined and recorded daily. In addition, the position of the other closed valve located in the high pressure piping shall be recorded daily.
5. Valves RHR-1A(B), RHR-2A(B) and RHR-11 are included in preventive maintenance procedure 34-4. Valves PR-1A and PR-1B are included in preventive maintenance procedure 36-3. Both these procedures consist of circuit breaker maintenance, an insulation resistance test, valve operator maintenance, and an amperage and timing check.