

WESTINGHOUSE GAS AND ELECTRIC CORPORATION, 300 WEST 10TH AVENUE, PITTSBURGH, PENNSYLVANIA 15222

RE: SEP-78

February 9, 1979

Director of Nuclear Reactor Regulation
ATTN: Mr. Dennis Ziemann, Chief
Operating Reactors Branch #2
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Ziemann:

Subject: SEP Topic III-5.A, High Energy Line Breaks Inside
Containment

Rochester Gas and Electric has prepared a list of piping lines inside the containment which normally or occasionally experience high energy service conditions. The listing is enclosed as Attachment A. This listing distinguishes between those lines which need not be considered for SEP Topic III-5.A because of line size, regulatory position SRP 3.6-1 or normal operating conditions and those lines, or portions of lines, which merit further consideration. Westinghouse has reviewed this list and plans to inspect the containment building along with RG&E during our upcoming refueling outage to identify any locations where potential high energy line breaks might have deleterious consequences. We expect that we may be able to eliminate additional lines from further consideration in Topic III-5.A as a result of this inspection and review. This approach to resolution of the Topic generally corresponds to approach number 2 as identified in an attachment to a letter dated September 7, 1978 from Darrell Eisenhut. Our refueling outage is scheduled to begin February 10, 1979 and last through mid March.

Westinghouse has reviewed original analyses performed for certain piping inside containment and is completing a summary report. We anticipate being able to provide that summary report to you before the end of February.

Based on stress analyses and the results of our inspections inside containment we expect to be able to discuss a specific program for resolving the remaining piping systems issues. Resolution may include inservice inspection or detailed analysis.

Sincerely yours,

L. D. White, Jr.
L. D. White, Jr.

Attachment

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Attachment A

LINE PENETRATING CONTAINMENT
WHICH NORMALLY OR OCCASIONALLY EXPERIENCE
HIGH ENERGY SERVICE CONDITIONS

Penetra- tion No.	Line Size	Designation	Normal Maximum Operating Conditions		Remarks
	(inches)		Press(psi)	Temp(°F)	
* Indicates those lines to be considered for potential high energy line breaks					
C Indicates normal maximum temperature is less than 200°F					
120	1"	Accumulator N ₂	700	C	vented during normal operation
102	2	*Charging (Alt.)	2250	C	no jet or whip upstream of check valve 383A; consider only line between RCPB and valve 383A
140	10	*RHR-out	360	350	consider only RCPB to valve 700, see SRP 3.6-1
108	3	RCP seal water-out	<100	200	normally operated <200°, alarmed at 190°
106	2	*RCP seal water-in	2250	C	
110	2	*RCP seal water-in	2250	C	
110 Bot	3/4	Accumulator test	1500	C	normally depressurized except during test
112	2	*Letdown	600	380	higher pressure and temperature upstream of orifices and regenerative heat exchanger
100	2	*Charging	2250	C	higher temperature downstream of regenerative heat exchanger

LINES PENETRATING CONTAINMENT
WHICH NORMALLY OR OCCASIONALLY EXPERIENCE
HIGH ENERGY SERVICE CONDITIONS

Penetra- tion No.	Line	Designation	Normal Maximum		Remarks
	Size (inches)		Operating Press(psi)	Conditions Temp(°F)	
* Indicates those lines to be considered for potential high energy line breaks					
C Indicates normal maximum temperature is less than 200°F					
206	3/8	Sample-Pressurizer liquid	2250	650	eliminate because of size
206	3/8	Sample-SG	1000	550	eliminate because of size
205	3/8	Sample-RCS HL	2250	650	eliminate because of size
207	3/8	Sample-Pressurizer steam	2250	650	eliminate because of size
207	3/8	Sample-SG	1000	550	eliminate because of size
301	2	Unit Htr Steam	150	340	not used when plant is hot
303	1	Unit Htr Steam	150	340	not used when plant is hot
322	2	*SG Blowdown	1000	550	
321	2	*SG Blowdown	1000	550	
401	30	*Main Steam	1000	550	
402	30	*Main Steam	1000	550	
403	14	*Feedwater	1000	430	
404	14	*Feedwater	1000	430	
111	10	*RHR-in	360	350	consider only RCPB to valve 721, see SRP 3.6-1
119&120		*Standby Aux Feed	1000	430	consider only main feedwater line to check valves 9705 A&B

LINES INSIDE CONTAINMENT BUT NOT PENETRATING CONTAINMENT
WHICH NORMALLY OR OCCASIONALLY EXPERIENCE
HIGH ENERGY SERVICE CONDITIONS

Line Designation	Size	System	Normal Maximum Conditions		Remarks
			Press(psi)	Temp(°F)	
* Indicates those lines to be considered for potential high energy line breaks					
C Indicates normal maximum temperature is less than 200°F					
		** RCS	2250	600	consider SI branch lines between RCPB and the first check valves
*Accumulator and Branch Lines	-	SI	700	C	consider only 2" branch lines to RCDT to valves 844A & B.
*Auxiliary Spray	2"	CVCS	2250	350	
*Pressurizer Surge	10"	RCS	2250	650	
*Pressurizer Spray	3"	RCS	2250	650	
Pressurizer Deadweight	1/8"	RCS	2250	650	eliminate because of size
Tester Tube Flange Leakoff	3/8-3/4	RCS	2250	600	eliminate because of size
Excess Letdown	3/4	RCS	2250	600	eliminate because of size
ROP N ₂ Lines	1"	ROP	300	C	eliminate because of size

**Reactor Coolant System piping breaks are being evaluated under generic topic A2, Asymmetric Loads.

