Duquesne Light
435 Sixth Avenue
Pittsburgh, Pa.
15219

(412) 456-6000

November 25, 1980

Director of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Attn: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
Washington, DC 20555

Reference: Beaver Valley Power Station, Unit No. 1
Docket No. 50-334
LWR Primary Coolant System Pressure Isolation Valves

Gentlemen:

Attached for your information are results of testing performed at Beaver Valley Power Station on check valves that are installed in the Event V configuration as described in your February 23, 1980 letter and our response dated March 17, 1980. The valves were tested initially on November 11 - 14, 1980 and were retested on November 18, 1980 following a plant trip and inadvertent safety injection.

In accordance with your February 23, 1980 letter, we are providing three (3) originals and thirty-seven (37) copies of our response. If you have any questions, please contact my office.

Very truly yours,

C. N. Dunn
Vice President, Operations

Attachment

cc: Mr. D. A. Beckman
U.S. Nuclear Regulatory Commission
Beaver Valley Power Station
Shippingport, PA 15077

U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, DC 20555

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(CORPORATE SEAL)

Attest:

Thomas Welfer

Thomas Welfer, Jr.
Secretary

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY

On this 26th day of November, 1980, before me, HENRY G. STOECKER, a Notary Public in and for said Commonwealth and County, personally appeared C. N. Dunn, who being duly sworn, deposed, and said that (1) he is Vice President of Duquesne Light, (2) he is duly authorized to execute and file the foregoing Submittal on behalf of said Company, and (3) the statements set forth in the Submittal are true and correct to the best of his knowledge, information and belief.

Henry G. Stoecker

HENRY G. STOECKER, Notary Public
Pittsburgh, Allegheny County, Pa.
My Commission Expires
February 20, 1982

Safety Injection System Cold Leg Check Valve Leakage Test Report

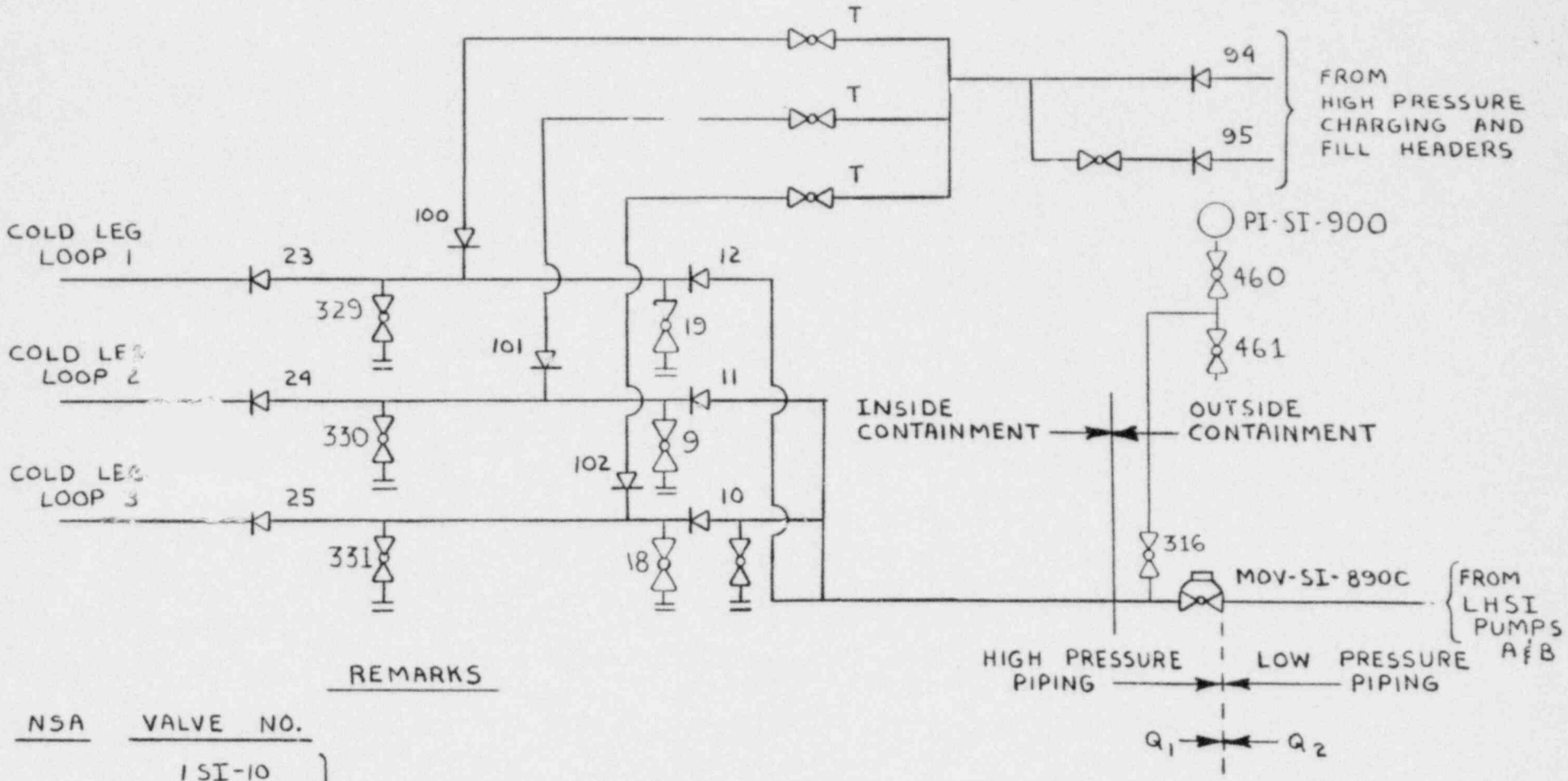
Testing of the Safety Injection (SI) System cold leg check valves SI-10, 11, 12, 23, 24 and 25, (refer to attached Figure 1 for valve numbers) was performed to satisfy concerns related to possible leakage of primary coolant system in-line check valves and the postulated failure of the associated check valve (EVENT V).

Initial testing of the valves was performed on November 10, 11 and 14, 1980. No leakage was observed on check valves SI-10, 11 and 12. Leakage of 0.1 gpm for check valve SI-23, 0.5 gpm for check valve SI-24, and 0.92 gpm for check valve SI-25 was observed. Testing was also performed on November 18, 1980 after a plant trip and inadvertant safety injection had occurred the previous day. No leakage was observed for any check valve during this second test.

Testing of the check valves was accomplished using the following method. Three test rigs consisting of a blank flange with a 1/16" hole drilled through the center to which was affixed tubing, valves and a pressure gage as shown in Figure 2, were attached to the system at a low point drain located between each of the three check valve pairs. Check valves SI-10, 11 and 12 were tested concurrently. Initial pressure, as indicated at Pressure Indicator PI-SI-900 (Figure 1), was recorded. Valve T_1 (Figure 2) was opened and pressure upstream of check valves SI-10, 11 and 12, as indicated on the test gage (Figure 2), was increased to a minimum of 2000 psig. Pressure at PI-SI-900 was monitored and the time to reach either 200 psig or a stabilized lesser pressure was determined. For both the initial test and the test performed on November 18, 1980, there was no increase in pressure observed at PI-SI-900, and, therefore, it can be concluded that no leakage occurs across the check valve seats of valves SI-10, 11 and 12. If there had been a pressure increase, the leak rate would be calculated by opening valve SI-46 (Figure 1) and determining the time required to drain and collect the amount of water necessary to reduce the pressure to the initial pressure.

Check valves SI-23, 24 and 25 were then individually tested. The initial pressure as indicated on the test gage was recorded. The pressure downstream of SI-23 was then reduced to approximately 500 psig by opening valve T_2 (Figure 2). Valve T_2 was closed and a stop watch started simultaneously. The test gage was observed for increasing and/or stabilizing pressure. Leak rate was determined, if necessary, by opening valve T_2 and collecting water for one minute. The above method was repeated for check valves SI-24 and 25 using the test rig which had been installed on a drain line on their respective lines.

FIGURE 1 - LOW HEAD SAFETY INJECTION PUMPS TO REACTOR COOLANT SYSTEM COLD LEGS



REMARKS

NSA	VALVE NO.	
	1SI-10	LEAK RATE TESTED AT 18 MONTH INTERVALS PER ASME B & PV CODE SECTION XI
	1SI-11	
	1SI-12	
O	MOV-SI-890C	

T = THROTTLE VALVE

NSA = NORMAL SYSTEM ARRANGEMENT

18 1108 HERCULENE A. & P. SMITH CO., PGH., PA.

PW 1323-378

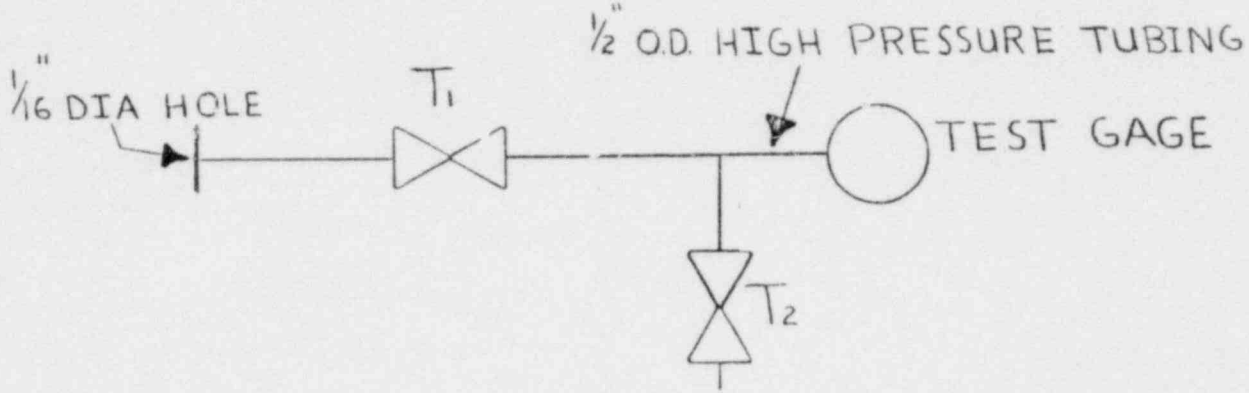


FIGURE 2