Duquesne Light

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May 6, 1986

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Mr. Peter Tam, Project Manager
Division of PWR Licensing - A
Office of Nuclear Reactor Regulation

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
SER Open Issue 9(d), Relief Valve Testing

REFERENCE: a) Initial Test Program Response, Letter No. 2NRC-5-110, Dated July 29, 1985.

GENTLEMEN:

Attached is a supplement to previous responses to open issue 9(d). This response addresses the reviewer's basic concern described in a telephone conversation on February 6, 1986. The attached response was subsequently discussed in another conversation on April 28, 1986.

DUQUESNE LIGHT COMPANY

By J. J. Carey
J. J. Carey
Vice President

GLB/jdw
Attachment
AR/NAR

cc: Mr. P. Tam, Project Manager (w/a)
Mr. J. M. Taylor, Director (3) (w/a)
Mr. W. Troskoski, Sr. Resident Inspector (w/a)
Mr. L. Prividy NRC Resident Inspector (w/a)
INPO Records Center (w/a)
NRC Document Control Desk (w/a)

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SUBSCRIBED AND SWORN TO BEFORE ME THIS
5th DAY OF May, 1986.

Sheila M. Fatiore
Notary Public

SHEILA M. FATIORE, NOTARY PUBLIC
SHIPPINGPORT BORO, BEAVER COUNTY
MY COMMISSION EXPIRES OCT. 23, 1989
Member, Pennsylvania Association of Notaries

COMMONWEALTH OF PENNSYLVANIA )
) SS:
COUNTY OF ALLEGHENY )

On this 5th day of May, 1986, before me, a Notary Public in and for said Commonwealth and County, personally appeared J. J. Carey, 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.

Sheila M. Fatiore
Notary Public

SHEILA M. FATIORE, NOTARY PUBLIC
SHIPPINGPORT BORO, BEAVER COUNTY
MY COMMISSION EXPIRES OCT. 23, 1989
Member, Pennsylvania Association of Notaries

ATTACHMENT 1
RESPONSE TO SER OPEN ISSUE 9(d)

QUESTION 640.18:

FSAR Subsection 14.2.12 test abstracts should be modified to demonstrate that capacities of pressurizer PORV's and main steam line atmospheric pump valves are consistent with the accident analysis assumptions for both minimum and maximum valve capacities.

PREVIOUS RESPONSE (REFERENCE a):

In regard to the pressurizer PORV's, Table 5.4-20 of the FSAR describes a capacity of 210,000 lb/hr. The accident analysis assumed a flow at least equal to the safety valve maximum capacity (345,000 lb/hr. from Table 5.4-20). Therefore, since the accident analysis assumes a flow which is roughly 164% of the PORV capacity, sufficient margin exists to preclude the need for a test.

In regard to the atmospheric steam dump valves (steam generator PORVs), FSAR 15.1.4 indicates a flow of 225 lb/sec. at 1,000 PSIA (810,000 lb/hr.) was assumed in the accident analysis Using the 26,200 lb/hr. at 100 PSIA is roughly 270,000 lb/hr. Since this is only 1/3 of the flow assumed in the accident analysis, sufficient margin exists to preclude the need for a test.

SUPPLEMENTARY RESPONSE:

In a telephone conversation to discuss this and other issues, the reviewer described his basic concern. DLC was asked to describe how it is known that flow cannot exceed the values assumed in the accient analyses.

In a later conversation it was indicated that the reviewer's concern was now limited to the atmospheric steam dump valves.

The general response to this question is that the flow rate assumed in the accident anaylysis far exceeds the critical flow rate.

With regard to atmospheric steam dump valves, a calculation was performed for effluent monitoring equipment design purposes. It assumed 1,000 PSIA at the valve inlet and a 10 inch inlet line. Using the valve capacity factor and the diffuser capacity factor, a flow of 270,000 lb/hr was calculated. But, since the actual inlet line is only 4 inch expanded to 10 inch, it can be seen that the 270,00 lb/hr. flow rate cannot be achieved through the 4 inch line regardless of valve characteristics. Since the 810,000 lb/hr. assumed in the accident analysis is several hundred percent more conservative than the unachievable flow rate of 270,000 lb/hr. testing cannot be justified.