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August 5, 1984

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

ATTENTION: Dr. Thomas E. Murley
Administrator

SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
Two Reactor Coolant System Wide-Range Pressure Transmitters
Significant Deficiency Report No. 82-02, Updated Final Report

Gentlemen:

On February 24, 1983, Duquesne Light Company (DLC) submitted the final report on Significant Deficiency No. 82-02, "Two Reactor Coolant System Wide-Range Pressure Transmitters."

This updated final report clarifies the reason for leaving the direct sensing wide range pressure transmitters in containment. DLC anticipates no further reports on this matter.

DUQUESNE LIGHT COMPANY

By E. J. Woolever
E. J. Woolever
Vice President

RW/wjs
Attachment

cc: Mr. R. DeYoung, Director (3) (w/a)
Ms. M. Ley, Project Manager (w/a)
Mr. E. A. Licitra, Project Manager (w/a)
Mr. G. Walton, NRC Resident Inspector (w/a)
NRC Document Control Desk (w/a)

SUBSCRIBED AND SWORN TO BEFORE ME THIS
4th DAY OF September, 1984.

Anita Elaine Reiter
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

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COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY)

On this 4th day of September, 1984, before me, a Notary Public in and for said Commonwealth and County, personally appeared E. J. Woolever, 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.

Anita Elaine Reiter
Notary Public

ANITA ELAINE REITER, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

BEAVER VALLEY POWER STATION - UNIT NO. 2
DUQUESNE LIGHT COMPANY

Updated Final Report on Potential Deficiency in Two Reactor Coolant System Wide-Range Pressure Transmitters

1. SUMMARY

Westinghouse Water Reactor Division (WRD) Safety Review Committee found that a Potentially Reportable Significant Deficiency exists for Beaver Valley Power Station - Unit No. 2 (BVPS-2) because of the potential post-accident inaccuracy of the Reactor Coolant System (RCS) wide-range pressure measurements. Wide-range RCS pressure measurements are used in a number of post-accident functions.

2. IMMEDIATE ACTION TAKEN

Westinghouse (W) notified Duquesne Light Company (DLC) of the potential problem by telephone on April 13, 1982. DLC notified E. B. McCabe of the Nuclear Regulatory Commission (NRC) by telephone on April 13, 1982. Additional details were provided to Region I office in interim reports dated May 12, 1982, October 18, 1982, and the final report dated February 24, 1983.

3. DESCRIPTION OF THE DEFICIENCY

Wide-range RCS pressure measurements serve as the criteria for the termination of safety injection (SI) in a number of post-accident functions. When combining transmitter, signal conditioning, and indicator allowance for error due to calibration uncertainty, drift, environmental effects, etc., recent qualification tests in a post-accident, high-energy line break environment have indicated that the wide-range RCS pressure channels exhibit inaccuracies. These inaccuracies may cause the pressurizer power-operated relief valves to be lifted prior to the termination of SI in a post-accident operation.

4. ANALYSIS OF SAFETY IMPLICATIONS

The inaccuracy of RCS wide-range pressure measurement leads to the possibility that the pressurizer power-operated relief valves may be lifted prior to the termination of SI. This could lead to a greater number of valve challenges, thus increasing the probability of a small loss-of-coolant accident due to the valve failing open. Likewise, the inaccuracy of this measurement could lead to the termination of SI below the setpoint for automatic SI.

5. CORRECTIVE ACTION TO REMEDY DEFICIENCIES

W has determined that the only way the wide-range pressure transmitters maintain required accuracy in-containment is if they are environmentally protected (temperature and radiation). If protection cannot be provided to the transmitters, they should be located out-of-containment. BVPS-2

has chosen to locate two wide-range RCS pressure transmitters outside the containment structure. These transmitters will connect to the Reactor Vessel Level Indication System instrument piping and will be installed in conjunction with that system. The two direct sensing wide-range RCS pressure transmitters which remain inside the containment will be used for cold overpressure protection.

6. ADDITIONAL REPORTS

This is an update to the final report. No additional reports are anticipated.