



435 Sixth Avenue
Pittsburgh, Pa.
15219

(412) 456-6000

May 12, 1982

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

ATTENTION: Mr. R. C. Haynes
Administrator

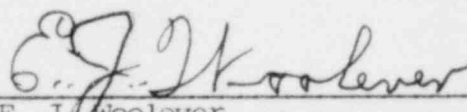
SUBJECT: Beaver Valley Power Station - Unit No. 2
Interim Report - Two RCS Wide-range Pressure Transmitters
Docket No. 50-412
Significant Deficiency Report No. 82-02

Gentlemen:

This interim report is in reference to the potential significant deficiency in two reactor coolant system (RCS) wide-range pressure transmitters reported to the Nuclear Regulatory Commission by E. F. Kurtz of Duquesne Light Company on April 13, 1982.

Due to the inaccuracy of RCS wide-range pressure measurement in a post-accident environment, Westinghouse is currently evaluating several possible corrective actions taking into account the licensing basis of Beaver Valley Power Station - Unit No. 2. Pursuant to the requirements of 10CFR50.55(e), a written interim report is submitted, and it is presently anticipated that a subsequent report on this matter should be submitted to you on October 18, 1982.

DUQUESNE LIGHT COMPANY

By 
E. J. Woolever
Vice President

JMM/wjs
Attachment

cc: Mr. G. Walton, NRC Resident Inspector (w/attachment)

Ms. E. Doolittle, Project Manager (w/attachment)

8205240150 820512
PDR ADOCK 05000412
S PDR

1627
5/11

1. DESCRIPTION OF THE DEFICIENCY

Wide-range reactor coolant system (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 relieve valves to be lifted prior to the termination of SI in a post-accident operation.

2. AFFECTED STRUCTURE(S), SYSTEM(S), COMPONENT(S)

The involved structures are two (2) reactor coolant system wide-range pressure transmitters supplied by the Westinghouse Corporation.

3. 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 set-point for automatic SI.

The potential post-accident inaccuracy of the RCS wide-range pressure measurement constitutes a Significant Deficiency for some plants under construction as defined in 10CFR50.55(e)(1)(ii). This determination was made because the design does not conform to the criteria and bases stated in the Safety Analysis Report or Construction Permit.

In particular, the accuracy functional requirements for Regulatory Guide 1.97, Revision 1 (including the requirements for safety grade cold shutdown, if so committed), are not demonstrated to be satisfied by the current instrumentation.

4. EVALUATION OF POSSIBLE CORRECTIVE ACTION

The Westinghouse Owners Group Procedures Subcommittee met on April 29 and 30, 1982. As part of this meeting, the SI termination requirements were reviewed. An additional report, including the results of this review, should be submitted to you on October 18, 1982.