

Docket Nos. 50-237/249  
50-254/265

FEB 04 1977

Commonwealth Edison Company  
ATTN: Mr. R. L. Bolger  
Assistant Vice President  
Post Office Box 767  
Chicago, Illinois 60690

Gentlemen:

RE: DRESDEN NUCLEAR POWER STATION UNIT NOS. 2/3  
QUAD CITIES NUCLEAR POWER STATION UNIT NOS. 1/2

We have completed our preliminary review of the information you submitted on November 30, 1976, regarding the instrumentation systems available at your facilities to monitor drywell to torus differential pressure ( $\Delta P$ ) and torus water level. This information was provided in response to our letter dated October 4, 1976, regarding Technical Specification requirements associated with the Mark I Containment Short Term Program Plant Unique Analyses.

Based on our review of the information provided in your response and your existing Technical Specification requirements for instrumentation systems which could be used to monitor drywell to torus  $\Delta P$  and torus water level, we have determined that your Technical Specifications should be revised to incorporate instrumentation system requirements which meet the NRC staff technical position detailed in the enclosure. Consequently, you are requested to provide the following information and commitments within 20 days of receipt of this letter:

- a. Your commitment to install instrumentation systems to monitor drywell to torus  $\Delta P$  and torus water level which meet the minimum requirements of the enclosed NRC staff technical position;
- b. Your schedule for completion of the installation of such systems; and
- c. Your commitment to request appropriate Technical Specification changes relating to this instrumentation following installation.

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Installation of the above-mentioned instrumentation systems and your request for appropriate Technical Specification changes should be accomplished in an expeditious manner but no later than April 15, 1977.

Original signed by:  
Karl R. Goller

Karl R. Goller, Assistant Director  
for Operating Reactors  
Division of Operating Reactors

Enclosure:  
NRC Staff Technical Position

cc w/enclosure:  
See next page

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cc w/enclosure:

Mr. Charles Whitmore  
President and Chairman  
Iowa-Illinois Gas and  
Electric Company  
206 East Second Avenue  
Davenport, Iowa 52801

Mr. John W. Rowe  
Isham, Lincoln & Beale  
Counselors at Law  
One First National Plaza, 42nd Floor  
Chicago, Illinois 60603

Anthony Z. Roisman, Esquire  
Roisman, Kessler and Cashdan  
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ENCLOSURE 1

NRC Staff Technical Position On Instrumentation  
Systems to Monitor Torus to Drywell Differential  
Pressure and Torus Water Level

In consideration of the significance of drywell to torus differential pressure ( $\Delta P$ ) control and torus water level control to the results of the Mark I Containment Short Term Program Plant Unique Analyses, we have concluded that a minimum of two narrow range instrument channels should be provided to monitor each of these plant parameters.

Operational experience indicates that pressure transducers tend to drift and water level indicators tend to stick; these observations, together with standard instrument calibration frequency requirements, form the basis for our requirements for a minimum of two instrument channels per parameter.

The significance of variations in drywell to torus  $\Delta P$  and torus water level and the magnitude of the LOCA-related hydrodynamic loads on torus support systems forms the basis for our requirement for narrow range instrumentation to accurately measure these parameters. The error-band of the instrumentation used to monitor the drywell-wetwell differential pressure and the torus water level should be small in comparison to the absolute value of the parameter being measured. Based on the load sensitivity curves presented in Addendum 2 to the Mark I Containment Short Term Program Final Report and typical instrument accuracies, we conclude that the error in the  $\Delta P$  measurement should be no greater than  $\pm 0.1$  psid and that the error in the torus water level measurement should be no greater than 10% of the difference between the maximum and minimum torus water level (i.e., if the difference between maximum level and minimum level = 4", then the instrument error should be  $\leq .4$ ").

The Technical Specifications for each Mark I BWR facility (except Brunswick Units Nos. 1 and 2) should include requirements consistent with this position. Action to be taken in the event that one or both of the instrument channels is out of service should be consistent with other requirements for surveillance instrumentation.

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