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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76012

August 13, 1979

In Reply Refer To:
RIV
Docket Nos. 50-498/IE Bulletin 79-21
50-499/IE Bulletin 79-21

Houston Lighting & Power Company
ATTN: Mr. E. A. Turner, Vice President
Power Plant Construction and
Technical Services
Post Office Box 1700
Houston, Texas 77001

Gentlemen:

The enclosed IE Bulletin 79-21 is forwarded to you for information. No written response is required. If you desire additional information regarding this matter, please contact this office.

Sincerely,

Karl V. Seyfrit
Director

Enclosures:
1. IE Bulletin No. 79-21
2. Listing of IE Bulletins Issued in Last 6 Months

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

IE Bulletin No. 79-21
Date: August 13, 1979

TEMPERATURE EFFECTS ON LEVEL MEASUREMENTS

Description of Circumstances:

On June 22, 1979, Westinghouse Electric Corporation reported to NRC a potential substantial safety hazard under 10 CFR 21.

The report, Enclosure No. 1, addresses the effect of increased containment temperature on the reference leg water column and the resultant effect on the indicated steam generator water level. This effect would cause the indicated steam generator level to be higher than the actual level and could delay or prevent protection signals and could also provide erroneous information during post-accident monitoring. Enclosure No. 1 addresses only a Westinghouse steam generator reference leg water column; however, safety related liquid level measuring systems utilized on other steam generators and reactor coolant systems could be affected in a similar manner.

Actions To Be Taken By Licensees:

For all pressurized water power reactor facilities with an operating license:*.

1. Review the liquid level measuring systems within containment to determine if the signals are used to initiate safety actions or are used to provide post-accident monitoring information. Provide a description of systems that are so employed; a description of the type of reference leg shall be included, i.e., open column or sealed reference leg.

2. On those systems described in Item 1 above, evaluate the effect of post-accident ambient temperatures on the indicated water level to determine any change in indicated level relative to actual water level. This evaluation must include other sources of error including the effects of varying fluid pressure and flashing of reference leg to steam on the water level measurements. The results of this evaluation should be presented in a tabular form similar to Tables 1 and 2 of Enclosure 1.

3. Review all safety and control setpoints derived from level signals to verify that the setpoints will initiate the action required by the [illegible] analyses throughout the range of ar[illegible] instrumentation, including accident[illegible] these setpoints.

*Boiling water reactors have been reque[illegible] the NRC to provide similar information

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