UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket Nos. 50-277
50-278

AUG 13 1979

Philadelphia Electric Company
ATTN: Mr. S. L. Daltroff
Vice President
Electric Production
2301 Market Street
Philadelphia, Pennsylvania 19101

Gentlemen:

The enclosed 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,

R. W. McDaniel for
Boyce H. Grier
Director

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

cc w/encls:
W. T. Ullrich, Station Superintendent
Troy B. Conner, Jr., Esquire
Eugene J. Bradley, Esquire
Raymond L. Hovis, Esquire
Warren Rich, Esquire

ENCLOSURE 1

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, Attachment 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. Attachment 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 Attachment 1.

*Boiling water reactors have been re
NRC to provide similar information.