

# GENERAL ELECTRIC

NUCLEAR POWER

SYSTEMS DIVISION

GENERAL ELECTRIC COMPANY, 175 CURTNER AVE., SAN JOSE, CALIFORNIA 95125  
MC 682 (408) 925-5040

MFN 173-82  
CAC 89-82

November 18, 1982

U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Washington, D. C. 20555

Attention: Richard C. DeYoung

SUBJECT: 10CFR PART 21, REPORTABLE CONDITION  
LOCAL INSTRUMENT PANEL PIPING

This letter is to inform the NRC of a reportable defect per 10CFR Part 21, as reported to W. R. Mills of your office by C. A. Cameron, Manager of Safety Evaluation Programs on November 18, 1982.

The defect is an error on four local instrument panel piping diagrams which resulted in a potential incorrect interface with the reactor pressure vessel instrument piping. A local instrument panel contains transmitters used to monitor the reactor pressure vessel water level and pressure. The attached evaluation identifies all pertinent information required by 10CFR Part 21. Although the condition is reportable, the plant could not have begun operation without the defect being detected.

The defect occurred only on the Limerick 1 and 2 plants. No operating plants are affected. General Electric has informed the Philadelphia Electric Company of the defect and the actions required for correction.

Very truly yours,

  
Glenn G. Sherwood, Manager

Nuclear Safety and Licensing Operation

cc: L. S. Gifford, GE - Bethesda  
W. R. Mills, NRC  
R. C. Haynes, NRC - Region I  
U. Potapovs, NRC - Region IV  
R. C. DeYoung, NRC (2 extra copies)

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## REPORTABLE CONDITION

1. Name and address of the individual or individuals informing the Commission.

Dr. Glenn G. Sherwood, Manager of Safety and Licensing Operation, General Electric Company, 175 Curtner Avenue, San Jose, California, 95125.

2. Identification of the facility, the activity, or the basic component supplied for such facility for such activity within the United States which fails to comply or contains a defect.

Interface documentation for local instrument panels containing reactor water level and pressure instruments.

3. Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

General Electric Company, Nuclear Energy Business Operation, San Jose, California.

4. Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

Drawing errors in the local instrument panel piping diagram resulted in a potential incorrect interface with the reactor pressure vessel instrumentation P&ID. Four local panels H23-P004, -P005, -P026 and -P027 containing water level and pressure transmitters would have been incorrectly connected at the site. The incorrect assembly of the instruments to the reactor pressure vessel nozzle would result in the water level instruments functioning in reverse, and the pressure instruments functioning incorrectly. The instruments would register the reactor vessel water level opposite to the actual condition, i.e. high water level would register low and vice versa. Should the condition go undetected and the incorrect assembly made, the condition would severely compromise the Emergency Core Cooling System network design basis. Safety systems that are initiated by signals from the water level and pressure transmitters are Reactor Protection System, Nuclear Steam Supply Shutoff System, Core Spray, High Pressure Coolant Injection, Automatic Depressurization System and Residual Heat Removal. However, this condition could never actually go undetected. The reversed instrumentation connections would be obvious beginning with the initial hydro test, pre-operation checkout, pre-operation testing and/or any attempt to startup where the instrumentation used would indicate water level and pressure within the reactor vessel.

5. The date on which the information of such defect or failure to comply was obtained.

November 16, 1982

6. In the case of a basic component which contains a defect or fails to comply, the number and location of all such components in use at, supplied for, or being supplied for one or more facilities or activities subject to the regulations in this part.

This condition is unique to the Limerick Power Station and has been isolated to only four panels identified as H23-P004, -P005, -P026 and -P027.

7. The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

Field Deviation Disposition Requests have been issued by the General Electric Company to the Philadelphia Electric Company, defining and authorizing necessary corrective changes to the instrument panels. Corrective action documents and their issue dates are: FDDRs HHI-1467 9/17/82 and HHI-1343 - 5/22/82.

8. Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

None.