



# VERMONT YANKEE NUCLEAR POWER CORPORATION

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WVY 79-83

REPLY TO:  
ENGINEERING OFFICE

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July 27, 1979

United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Attention: Office of Nuclear Reactor Regulation  
Thomas A. Ippolito, Chief  
Operating Reactors Branch #3  
Division of Operating Reactors

References: (1) License No. DPR-28 (Docket No. 50-271)  
(2) USNRC Letter to YAEC dated August 7, 1979  
(3) VYNPS Letter (WVY 78-92) to USNRC dated October 11, 1979

Dear Sir:

Subject: Reactor Protection System Power Supply

Reference (2) identified certain concerns regarding the Reactor Protection System Motor-Generator Sets, wherein a unique sequence of events is postulated to adversely affect the operability of the Reactor Protection System. We were asked to evaluate our system and determine whether the same characteristics as those identified in Reference (2) were possible following a similar chain of events.

Our response, Reference (3), was based on preliminary information from the General Electric Company which indicated that although the chain of events postulated in Reference (2) was technically possible, this unique combination and sequence of events had an extremely low probability of occurring and thus was not a problem which required any modifications to the Reactor Protection System. In order to support this position, we stated that General Electric was in the process of performing a Failure Modes and Effects Analysis; and, in addition qualification work was in progress to evaluate the capabilities of the installed equipment. We committed to inform you of our position on completion of the above efforts.

General Electric has since conducted; (1) a Failure Modes and Effects Analysis (FMEA), where hypothesized single and common mode failures are analyzed and; (2) a seismic performance evaluation test where a specimen of an RPS MG Set Protective Circuit was tested under simulated seismic conditions on a shaker table. Based on these two programs, General Electric concluded with the following statements:

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"The FMEA summary concludes that the risk of an RPS failure with the present design is sufficiently low and acceptable" and

"The seismic performance test ... concludes that the specimen demonstrated sufficient integrity to withstand the prescribed simulated seismic event environment without compromise of structure or electrical functions."

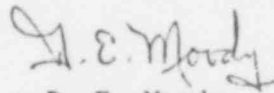
Based on the information contained in these studies, together with the minor equipment modifications made to satisfy the calibration requirements of Reference (2), we conclude that no additional studies or modifications are required.

In order to satisfy concerns associated with the postulated single failure of motor-generator set equipment, we will continue to perform the surveillance and testing outlined in Reference (3).

We trust that the information provided above is adequate to close out this issue; however, should you have any questions, do not hesitate to call.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION



D. E. Moody  
Manager of Operations

DEM/jgh