GULF STATES UTILITIES COMPANY
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January 22, 1985
RBG-19961
File Nos. G9.5, G9.25.1.1

Mr. Robert D. Martin, Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV, Office of Inspection and Enforcement
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Dear Mr. Martin:

River Bend Station Unit 1
Docket No. 50-458
Final Report/DR-255

On November 19, 1984, GSU provided Region IV an interim 30-day written report on DR-255 concerning Topaz inverters supplied by General Electric Company that were determined to be reportable under 10CFR50.55(e). The attachment to this letter is GSU's final 30-day written report pursuant to 10CFR50.55(e)(3) with regard to this deficiency.

Sincerely,

L. A. England

for J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JEB/PJD/lp

Attachment

cc: Director of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC Resident Inspector-Site

INPO

IE-27
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ATTACHMENT

January 22, 1985
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DR-255 Topaz Inverters
Supplied by General Electric Company

Background and Description of the Problem

The problem involves the adjustment of the low voltage shutoff and turnon for GE dedicated Class 1E inverters (GE Drawing 184C4723). This adjustment was set too high by the original manufacturer (Power Mark, a Division of Topaz). The GE dedication process was checking for an operable range of 105 to 140 volts DC, instead of 100 to 140 volts. Topaz had been routinely setting the low voltage cutoff at 105 volts DC. Typical DC bus voltage are GE specified to range from 108 to 132 volts with momentary voltage dips to 105 volts DC during the startup of large DC loads.

Safety Implication

The above deficiency could result in a condition where the inverter may not start or restart until the voltage is increased not just to 105 but to above 118 volts DC (13 volt fixed offset). Since the allowable momentary dip of the input bus voltage is equal to the factory preset inverter low voltage cutoff (105 VDC), this dip could result in an inverter trip and a failure to restart during a design basis accident.

The subject inverters are used to power 24 VDC instrument buses to RCIC and various Emergency Core Cooling Systems (ECCS) including HPCS, ADS, RHR, and LPCS. Other applications include the Remote Shutdown and Leak Detection Systems.

Corrective Action

GE has revised the inverter drawings to specify that the inverter shall not trip at voltages between 100 and 140 VDC, and after an inverter trip, it shall resume operation when input voltage increases to 108 VDC. The dedication procedure reflects these operational requirements. FDDR LDI-2715 has been issued to test inverter trip and restart voltages and adjust as necessary to insure that the inverters will operate at anticipated bus voltages