

DUKE POWER COMPANY
OCONEE UNIT 3

Report No.: RO-287/76-16

Report Date: October 7, 1976

Occurrence Date: September 12, 1976

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Loss of power to ES equipment due to failure of static inverter

Conditions Prior to Occurrence: Unit at 45 percent full power

Description of Occurrence:

On September 12, 1976 the failure of an input filtering capacitor on the 3DIB Vital Bus Inverter resulted in a loss of power to the 3KVIB AC Vital Instrumentation Power Panelboard. This resulted in various parameters of the RPS Channel B tripping. Power was immediately restored by manually transferring the 3KVIB panelboard loads to the 3KRA AC Regulated Power Panelboard. The 3DIB Vital Bus Inverter was returned to service in approximately 12 hours.

Apparent Cause of Occurrence:

The apparent cause of this occurrence was the breakdown of the dielectric of an input filtering capacitor on the 3DIB Vital Bus Inverter. This malfunction caused a current surge which tripped the inverter input circuit breaker and resulted in the loss of power to the 3KVIB AC Vital Instrumentation Power Panelboard.

Analysis of Occurrence:

This occurrence resulted in the trip of various parameters associated with RPS Channel B. Additionally, the even digital channel ES actuation and one ES analog channel actuation were not available for the very short period of time necessary to manually transfer the 3KVIB panelboard to the regulated AC source. During this short time period, the redundant odd digital channels and two remaining ES analog actuation channels were available and would have functioned properly if required. During the time period that inverter repairs were in progress, these functions received AC power from a non-load-shed AC source and would have functioned properly if required. The 3DIB vital bus inverter was restored to service within the time period permitted by Technical Specification 3.7.2.(d). It is therefore considered that due to the availability of redundant ES equipment and the brief interval over which power was lost that the health and safety of the public was not affected by this occurrence.

Corrective Action:

The 3DIB Vital Bus Inverter was repaired and returned to service. This occurrence was a random equipment failure and, therefore, it is felt that no further corrective action is appropriate.

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