Lesson Learned

Communication Equipment DC Power Failure

Primary Interest Groups

Transmission Operators
Transmission Operators

Problem Statement

A DC-power-plant-controller used by a microwave communications center had an internal failure, causing back-up battery voltage to be drawn down and power to be lost to the microwave facility.

Details

The DC-power-plant controller was found to have sent a signal to the internal Low Voltage Battery Disconnect (LVBD) to open, which allowed the battery voltage to draw down and limit power available to a microwave-communications facility. It is not known why the controller was defective.

Corrective Actions

The DC-power-plant controller was the root cause of the incident. The controller should not have sent a signal to the internal LVBD to open, which allowed the battery voltage to draw down. To remediate the issue, the LVBD bypass switch was forced to close which then connected the load, battery, and rectifiers to charge the batteries and run the load. The DC-power-plant controller was subsequently replaced.

Lesson Learned

Personnel initially thought that a problem existed with the rectifier. The Lesson Learned is to consider the potential for a DC-power-plant controller to fail. In this case, the misoperation of the controller caused the microwave facility to draw power from the back-up battery resources rather than the AC source.