



Generic Qualification of Tricon PLC System

MPR Creates Qualification Prototype for Addressing Digital Equipment

CHALLENGE

MPR developed and implemented the program to qualify the Tricon PLC System for use in safety related nuclear applications. The engineering and testing program included environmental, seismic, EMC, and Class 1E to non-1E Isolation. The test program qualified the system chassis, power supplies, processor modules, analog input & output modules, digital input & output modules, relay output modules, and communication modules.

SOLUTION

MPR developed a comprehensive development, testing, and qualification plan specifically created based on the key USNRC and industry requirements for digital systems and digital components in safety related applications. Lessons learned from previous industry projects were considered to ensure the work was completed right the first time. The plan was executed and the qualification package compiled in accordance with strict Quality Assurance Program requirements.

RESULTS

NRC issued SER endorsing the acceptability of the PLC system for use in nuclear safety-related applications. MPR qualification of the Tricon is considered the prototype of how to properly perform digital equipment qualification.

