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I-2 IEC-60960 revision: Human factors issues in SPDS design in nuclear power plants

Abstract:

After the accident of the nuclear power plant in Three Mile Island in 1980s, the concept of Safety Parameter Display System (SPDS) was proposed internationally. SPDS, as one of the important human-machine interfaces, is used to enhance the ability of control room personnel to overall monitor the safety status of nuclear power plants, especially under abnormal conditions and accident conditions, in order to improve the safety of reactor operation. The International Electrotechnical Commission (IEC) released the standard IEC 60960, which outlined the functional requirements, display specifications, and performance criteria for SPDS in 1988. However, with the development of computer technology and human factors engineering, this standard needs to be updated to adapt the design of SPDS to the current development system of control room design and human factors engineering. The purpose of this presentation is to provide an overview of the ongoing revision of IEC 60960, highlights the directions of the changes and the current status of the revision process, and finally discusses the development direction of SPDS and human factors issues in SPDS design.