



THE FIRE PROTECTION RESEARCH FOUNDATION

Development of Quantitative Risk Assessment Examples for Operating Rooms

Project Summary

Background

The recent movement toward using risk based approaches in assessing safety risks around the world has caused the NFPA Technical Committee on Health Care Facilities (responsible for NFPA 99) to incorporate requirements related to risk analysis in NFPA 99, *Health Care Facilities Code*. As the result of the Foundation project *Evaluation of Health Care Operating Rooms as Wet/Dry Locations*, NFPA 99 Section 6.3.2.2.8.4 states, “Operating rooms shall be considered to be a wet procedure location, unless a risk assessment conducted by the health care governing body determines otherwise.” This means that operating rooms shall be provided with special protection against electric shock unless a risk assessment proves otherwise.

The previously mentioned Foundation study includes a methodology framework for this type of quantitative risk assessment. However, the current version of NFPA 99 does not incorporate any guidance on performing a risk analysis. The Technical Committee would like to incorporate guidance on performing this type of risk assessment in Annex material of NFPA 99. This guidance would include the methodology developed in the previous study as well as worked examples.

Research Objective

Develop user guidance (including worked examples) to assist users of the NFPA 99 in completing a quantitative risk assessment for an operating room.

Project Description

The proposed project would consist of the following tasks:

1. Format the risk assessment methodology developed in project on *Evaluation of Health Care Operating Rooms as Wet/Dry Locations* into suitable annex material for NFPA 99. This information should include hazard scenarios and key attributes.
2. Review currently available data on hazard scenarios, including those listed in the above study, and develop a recommended set of references/data sources for use in QRA.
3. Create user guidance including worked examples to illustrate the application of the method.