

Protective Clothing Research in the National Research Council of Canada's Fire Risk Management Program

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The Fire Risk Management Program, part of the National Research Council's (NRC's) Institute for Research in Construction, is a multi-disciplinary team of engineers, physicists, chemists and environmental psychologists. This team is committed to developing effective solutions for reducing the high cost of fire and its negative impact on the Canadian economy and quality of life. The two main goals of the program are:

- to develop computer models to assess fire risks in buildings to lower construction costs while maintaining fire safety and providing support for performance and objective-based building codes; and
- to develop cost-effective fire-control systems in the fields of structural fire protection, fire barriers and water-based fire suppression.

Recently, the Fire Risk Management Program began a research project to develop improved methods of estimating the useful lifetime of firefighters' protective clothing. Firefighters are interested in the performance of their clothing over its entire lifetime, and are very interested in when they should retire their turnout gear. Currently, most guidelines for the retirement of protective clothing are based on subjective spot testing. Improvements to these

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