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Institute for Research in Construction

Bringing quality to the built environment

Simulation of a Fire Incident Involving a Smouldering Sofa Fire

Objective

To conduct tests that simulate a fire incident involving a smouldering sofa fire, and to investigate how various firefighting tactics could have affected fire development.

Background

The Montreal Fire Service has asked NRC-IRC to simulate a fatal fire in January 2006 in order to determine the composition and concentrations of the smouldering combustion products and their ignitibility, the flame spread rate in the smouldering combustion products once ignited, as well as how alternative firefighting tactics might have affected development of the fire.

Statement of Work

- Develop an ignition source that can generate such smouldering fires, determine the combustion gases they produce, and the ignitibility of the smoke layer
- Construct and instrument a full-scale mock-up of the Montreal apartment to investigate to what extent the door on the fire room would have limited flame spread, and how various fire suppression options could have affected fire development

Expected Outcomes

- A report documenting fire tests and their outcomes
- A paper presented at a scientific conference

Partners

Service de sécurité incendie de Montréal

Start/Expected Completion Dates

This project began in Dec. 2006 and will be in completed in July 2008.

Project Manager

Dr. Gary Lougheed: 613-993-3762; Gary.Lougheed@nrc-cnrc.gc.ca

For more information, please see http://irc.nrc-cnrc.gc.ca/fr/mfc/smouldering_e.html

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