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Discovery Channel Visits NRC

Monday 24 November 2003

Last week the Discovery Channel's film crew visited the NRC Institute for Research in Construction (NRC-IRC) facility in Almonte, Ontario. NRC-IRC's Active Fire Protection team demonstrated a transformer fire at the National Fire Laboratory (commonly known as U-96) for a future episode of the Discovery Channel's popular programme, "Frontiers of Construction."

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The Discovery Channel's film crew with NRC-IRC's George Crampton

Friday's power transformer fire blazed at the base and top of the scale mock-up while flames simultaneously cascaded down the front of the structure. In less than 45 seconds the fire was put out using FireFlex's compressed air foam extinguishing system, which is based on multiple patents licensed from NRC-IRC. The compressed air foam system is a cost-competitive, efficient and more environmentally friendly alternative to traditional water deluge systems. Traditionally, a typical transformer fire would take 10-12 minutes to extinguish using 2,000 litres of water per minute. The compressed air foam system requires a fraction of the water-5.6 times less than the deluge method-to snuff the fire in less a minute. Another

downside to the deluge method is that all that water becomes contaminated and forms massive pools of biohazardous water at the base of the burning structure.



Power transformer fire blazes at NRC-IRC

NRC-IRC's George Crampton, Don Carpenter, Sarah Mangione, Cameron McCartney, Michael Ryan, Bruce Taber, Dr. Russ Thomas and Mike Wright were onsite for the demonstration. Built in 1980, NRC-IRC's massive National Fire Laboratory is 55-metres long, 30-metres wide and 12.5-metres high. This unique facility is designed specifically to conduct various full-scale fire experiments. The site also has a fully instrumented 10-storey tower for evaluating smoke movement and smoke-control measures. NRC staff use the facility to develop cost-effective and innovative active fire protection systems, including fire suppression, detection and smoke management systems for use in buildings and for numerous

other applications. The research is also used to provide input to national codes and international standards writing groups.



Compressed air foam, based on NRC-IRC patents, extinguishes a transformer fire

"Frontiers of Construction" airs in over 100 countries around the globe and presents engineering and scientific discoveries that have enabled humans to create the most modern, large-scale, technologically complicated construction projects. Now in its fifth season, "Frontiers of Construction" has featured past episodes on the NRC Institute for Ocean Technology (NRC-IOT), formerly the NRC Institute for Marine Dynamics (NRC-IMD), as well as the International Space Station, the Eurotunnel, and Vancouver's Lion's Gate Bridge, to name just a few. Various other Discovery Channel programs have also been filmed at the NRC Institute for Aerospace Research (NRC-IAR).

Continue tuning in to Zone to find out the exact date this spring when the NRC-IRC segment will air on the Discovery Channel.

