

# FIRE FIGHTER FATALITY INVESTIGATION AND PREVENTION PROGRAM (FFFIPP)



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In fiscal year 1998, Congress recognized the need to further efforts to address the significant number of fire fighter fatalities. Congress funded NIOSH to implement a safety initiative for the fire service. The NIOSH Fire Fighter Fatality Investigation and Prevention Program (FFFIPP) conducts investigations of fire fighter line-of-duty deaths and serious injuries to formulate recommendations for preventing future occurrences. These investigations are conducted using the NIOSH Fatality Assessment and Control Evaluation (FACE) methodology which involves on-site investigations to gather information on the incident environment, the fire fighter, the task the fire fighter was performing, the tools the fire fighter was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interacted. Findings are summarized in a report and recommendations are made for preventing future deaths and serious injuries under similar circumstances. Since the inception of the program there have been more than 500 fire fighter fatality investigative reports published.

### INVESTIGATIVE FINDINGS

Members of the Fire Fighter Fatality Investigation and Prevention Program (FFFIPP) have worked with the National Fire Protection Association (NFPA) standards making process and the National Institute of Standards and Technology (NIST) testing laboratory to develop and implement changes for performance requirements as well as requirements for NFPA certified facepieces.

- -All of the fire fighter fatalities involved in the reviewed incidents were likely still "on air" at the time of the event.
- -Conditions encountered likely exceeded the performance capabilities of the SCBA facepieces. -Review of data suggests that the fire fighters suffered thermal injuries SCBAs and PPE.
- to their respiratory system. -Many of the fire fighters involved in the incident were close to an escape point.
- -Findings suggest a need for further research into the thermal resistivity capability of the SCBA facepiece. present data forward to provide and enhance the protection levels of
- -NIOSH will continue to forward investigation reports from any future fire fighter fatality investigations that suggest performance issues with the SCBA facepiece or components that impact on NFPA certification. -We welcome suggestions from our stakeholders on specific information that NIOSH could collect during fatality investigations.

INDIVIDUALS CAN VIEW AND SUBSCRIBE TO RECEIVE NOTIFICATION OF NEW REPORTS AND PRODUCTS AT: www.cdc.gov/niosh/fire

-Findings suggest a need to bring the research bodies and the fire service with information to raise awareness

# SCBA FACEPIECE THERMAL DEGRADATION

Recent Fire Fighter Fatality Investigations in Maryland, Pennsylvania, and Texas have identified concerns that SCBA facepiece lenses suffered thermal degradation in extreme fire fighting conditions. The facepiece lenses currently represent the weakest component of a fire fighter's protective ensemble in these extreme conditions.







## SCBA INVESTIGATIONS - INJURY INCIDENTS

Recent Fire Fighter Injury Investigations of near-miss incidents, in several metropolitan-size fire departments, in which fire fighters experienced thermal degradation to the SCBA facepiece and survived.







#### SUMMARY OF PROGRESS

- -Enhancement to NFPA 1981 Standard on Open-Circuit Self-Contained Breathing Apparatus for Emergency Services related to heat and flame performance testing.
- -Increase the thermal resistive capabilities of the SCBA facepiece.