

PROFESSIONAL DEVELOPMENT SEMINAR

Saturday, November 16, 2013

“Scientific Research on the Changing Severity of Fires and the Development of More Effective Firefighting Tactics”

Speaker: Stephen Kerber, Director, Firefighter Research Safety Institute, Underwriters Laboratories (UL).

Mr. Kerber's areas of research include improving firefighter safety, fire service ventilation, structural collapse and fire dynamics. He is a 13-year veteran of the fire service, with most of his service at the College Park Fire Department in Prince George's County, MD, where he served at ranks up through Deputy Chief. He received his bachelor's and master's degrees in fire protection engineering from the University of Maryland and is currently working on his doctorate in risk management and safety engineering at Lund University in Sweden. Mr. Kerber has also been appointed to the rank of Honorary Battalion Chief by the New York City Fire Department.

Stephen Kerber will be discussing the “fire formula” of modern homes, which addresses the fire growth impact of larger footprints, more open space, evolving fuel loads, greater concealed spaces, and changing building materials. The research conducted by UL on structural stability of engineered lumber, firefighter exposure to smoke particulates, impact of ventilation on fire behavior (both horizontal and vertical), and a new project on attic and exterior fire spread hazards was described with a focus on impacts for firefighter safety. This topic highlights that the operational time frame for the fire service continues to shrink and fire dynamics must be a fundamental basis for firefighting tactics, technology, education and training. This includes understanding the limitations of personal protective equipment, fire behavior as it relates to ventilation limitations, wind conditions; fire locations, flow path and consideration of aggressive exterior attack.

Additionally, research and fire experiments with UL and the National Institute of Standards and Technology (NIST) have examined the tactics of ventilation control and “transitional” fire attack on a variety of fire scenarios. These experiments were designed to answer questions on topics such as size up, controlling the “flow path, “pushing fire”, fire growth related to ventilation, and the concerns over applying hose streams from the outside. This presentation provides evidence that long held tenets of firefighting such as “Always attack from the unburned to the burned side,” “Applying a hose stream through the window will push fire,” and “The best way to attack a basement fire is down the stairs” are just not true.

AUDIENCE: Pennsylvania emergency services personnel currently serving as a Chief/Command Officer within a Pennsylvania career, volunteer or combination fire organization; or an ACTIVE State Fire Academy accredited Suppression Instructor. Limit one Chief/Instructor per department. All others will be put on a waiting list and accepted as open seats allow.

REGISTRATION: Advanced pre-registration is required and closes Friday, **November 1, 2013**. Registration is first-come, first-serve and is limited to 500 participants (Fire Chiefs/Suppression Instructors) that pre-register. Register by completing the attached PA State Resident Application.

Saturday, November 16th

- 0730 Check-in Registration**
(In Venue Lobby)
- 0830 Welcome**
Edward Mann, PA Fire Commissioner
George Stapleton, PA Fire Academy Administrator
- 0900 UL Scientific Research on the Changing Severity of Fires and Development of More Effective Firefighting Tactics**
- 1200 Lunch**
Provided courtesy of the Office of State Fire Commissioner
- 1300 UL Scientific Research... presented by Stephen Kerber** (continues)
- 1600 Certificates/Adjournment**

LOCATION - Central Pennsylvania
(Location to be confirmed)

CANCELLATION - Notify the State Fire Academy by November 1st. The State Fire Academy no-show policy will apply to all that register and do not attend.

TUITION/FEES - No registration fee for participants who are chief officer(s) affiliated with a Pennsylvania emergency service organization or a “Suppression” instructor with the PA State Fire Academy. No out of state registrations will be accepted.

LODGING – If desired, lodging is the responsibility of the attendee



OFFICE OF THE STATE FIRE COMMISSIONER
 PENNSYLVANIA STATE FIRE ACADEMY
 1150 RIVERSIDE DRIVE
 LEWISTOWN, PA 17044



Professional Development Seminar - Resident Application

Last Name: _____ First Name: _____ M.I.: _____

Social Security No.: _____ (_____) _____ (_____) _____
 (last 4-digits only) Daytime Phone # Nighttime Phone #

Street Address: _____ County: _____

City: _____ State: _____ Zip: _____ DOB: _____

Email Address: _____

Course Title: *Fire Service Professional Development Seminar: "Scientific Research on the Changing Severity of Fires and the Development of More Effective Firefighting Tactics"*

MEMBERSHIP DATA

Fire Department/Organization Affiliation:

Street Address: _____

City: _____ State: _____ Zip: _____

Members rank/title: _____

Status in organization (check one): Paid (career) Volunteer Instructor

I hereby request that I be enrolled in the Fire Service Professional Development Seminar specified on this application. Upon acceptance I will report for the identified seminar on the specified dates as an active member of the organization listed under "Membership Data"; furthermore I attest I have either the organizations or my own individual health coverage. I will notify the Academy of any changes regarding the completed information on this application.

_____ Signature

_____ Date

Student Cancellation/No Show Policy: *Space is limited. All cancellations must be in writing (letter/memo or email). Failure to follow the cancellation policy will result in a "No Show" status for the enrollee. If accepted and you do not show without proper notification, you will not be eligible to enroll in any other Pennsylvania State Fire Academy Resident course/seminars for a period of one year.*