

**LINE OF DUTY
DEATH REPORT
REPORT SLIDES**



F2023-11

Lieutenant and Probationary
Firefighter Die after experiencing
Thermal Degradation of Self-
Contained Breathing Apparatus
Facepiece Lenses - Maryland



Summary

- Two firefighters died after experiencing an unexpected hostile fire event at an occupied single-family rowhome on October 19, 2023.
- A 31-year-old career firefighter (E29 probationary) died after conducting interior firefighting operations.
- A 26-year-old career firefighter (E29 lieutenant), died on October 24, 2023, at a local burn center from serious injuries sustained working at the fire.



Side Alpha post fire event.
(Courtesy of Fire Marshal Office)



Summary

- Both firefighters were engaged in an interior fire attack.
- The single-family residential structure was an approximately 1,800 square foot, two story ordinary constructed rowhome, located second from the end.
- At approximately 1539 hours, the local communications center received a 9-1-1 call reporting a fire in the rear of the structure.
- At 1541 hours, the communications center dispatched box alarm 46-40 to a dwelling fire.
- Engine 29 (E29), Engine 45 (E45), Engine 52 (E52) as the Rapid Intervention Team (RIT), Engine 20 (E20), Engine 44 (E44), Truck 25 (T25), Truck 16 (T16), Battalion Chief 5 (BC5), Battalion Chief 3 (BC3), and Safety Officer 4 (SO4) were dispatched.



Summary

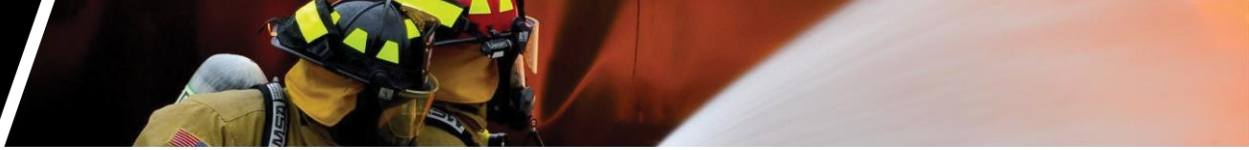
- Box alarm 46-40 included fire companies that are not usually assigned to this alarm because some of the regular companies were out for training or already responding to other incidents.
- Engine 46, Squad 40, and Truck 12 requested permission from the battalion chief to be assigned to the box alarm.
- E29 arrived on-scene at 1544 hours on side Alpha and E29 lieutenant reported fire showing from the rear (side Charlie) and assumed incident command (IC).
- E29's probationary firefighter stretched a 150' 1 3/4-inch attack line to side Alpha to make an interior fire attack.
- At 1545 hours, BC5 arrived on-scene and upgraded the box alarm to a working fire assignment to add additional resources to the box.



Summary

- BC5 assumed IC and announced the staging location for incoming fire companies.
- E52 arrived on-scene and assumed RIT on side Alpha.
- IC provided a situation report to the communications center and incoming fire companies at 1547 hours reporting a two-story porch front, second from the end of the group, with heavy fire on side Charlie with extension.
- IC established the incident command post on side Alpha.
- Upon arrival of E46 on side Alpha, IC requested E46 to stretch an attack line to side Charlie and stop the fire spread.

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Apparatus and initial attack and supply line placement. (Courtesy of NIOSH)



Summary

- At 1549:18 hours, E29 lieutenant transmitted “Mayday, Mayday, Mayday”.
- The IC immediately acknowledged the Mayday when a second Mayday transmission was broadcasted from E29 lieutenant at 1549:35 stating “Mayday, Mayday, Mayday, first floor”.
- The IC requested the location of E29 lieutenant and requested a RIT task force assignment from the communications center.
- The IC requested that BC3 have E46 start flowing water into the structure from side Charlie.

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Side Charlie exterior porch.
(Courtesy of NIOSH)

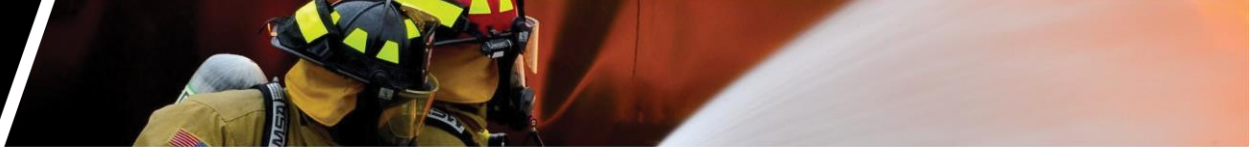


Side Charlie exterior porch frame.
(Courtesy of NIOSH)



Summary

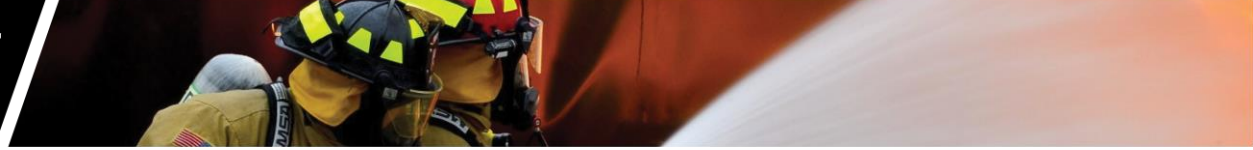
- BC3 acknowledged the request and informed IC that they had heavy fire on three dwellings on side Charlie and requested the location of the Mayday.
- IC requested a second alarm assignment from the communications center while visible fire was venting out of a side Alpha window which had fixed metal security bars.
- At 1552 hours, the E29 lieutenant was removed from the structure via the side Alpha door and was soon followed by E29 probationary at 1555 hours.
- Both E29 lieutenant and E29 probationary received advanced life support (ALS) care and were transported to a local trauma center.
- E29 probationary was pronounced deceased in the emergency room while E29 lieutenant was admitted to intensive care for treatment before succumbing to his injuries on October 24, 2023.



E29 Probationary firefighter's helmet. (Courtesy of NIOSH)



E29 Probationary firefighter's SCBA facepiece lens. (Courtesy of NIOSH)



E29 Lieutenant's helmet (Courtesy of NIOSH)



E29 Lieutenant's SCBA facepiece
lens (Courtesy of NIOSH)



Contributing Factors

- Strategy and tactics for exterior fires extending into the interior of a structure
- Thermal degradation and failure of Self-Contained Breathing Apparatus (SCBA) facepiece lenses and EBSS (Buddy Breather Whip)
- Recognition of fire dynamics
- Use of thermal imaging (TI) camera to observe changing fire conditions and escape routes
- Interior structural firefighting experience



Recommendations

- Develop policies that address both strategy and tactics as they relate to exterior fires, vertical fire spread, and horizontal extension into a structure.
- Consider upgrading or replacing current SCBAs to meet the 2013 or more recent edition of the NFPA 1981 or NFPA 1970 (1981) standard.
- Train firefighters in fire dynamics, recognition of flow paths, and tactics to reduce the potential of working in the exhaust portion of a flow path.
- Ensure proper training for firefighters on the use and limitations of TI devices as they relate to interpreting fire dynamics.
- Consider level of experience, tacit knowledge, skill familiarity, and the need for close supervision when assigning tasks with higher potential of injury to probationary firefighters.

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