



Delaware State Fire Commission

F.I.R.E. TEAM Incident Report



Executive Summary

On Tuesday, June 13, 2023, a residential structure fire at 28 Renee Lane in Newark, Delaware, led to the injury of two volunteer firefighters, aged 24 and 30, during fire suppression operations. The Hockessin Fire Company was dispatched at 1206 hours, with multiple fire companies responding, including Station 19 Hockessin, Station 14 Cranston Heights, Station 23 Minquas, Station 21 Mill Creek, Station 30 Belvedere, and Station 9 Aetna Hose Hook and Ladder, along with units from Pennsylvania Fire Companies. Upon arriving at



the scene, the Hockessin BLS Unit reported significant fire activity in the garage area on the Alpha side of the structure. The Cranston Heights Fire Company, Rescue 14, initiated first due special services assignments, while Hockessin Tanker 19 and the Hockessin Fire Captain arrived shortly thereafter and established incident command. During the operations, firefighters faced radio transmission issues, which hindered communication. To mitigate this, command directed all personnel involved in ground operations to use designated talk group channels. Interior crews advanced inside the structure, where a 24-year-old firefighter from Minquas Fire Company was operating a hose line on the second floor. Unfortunately, his SCBA mask became dislodged, causing him to inhale smoke. Meanwhile, the 30-year-old firefighter from Hockessin Fire Company was on the first floor deploying pike poles to pull ceilings when the second floor partially collapsed, striking him. A Mayday was declared at 1241 hours concerning the Hockessin firefighter, which was cleared by 1243 hours after he was successfully extracted, and all personnel were accounted for. Both injured firefighters were subsequently transported to the Christiana Hospital Emergency Department for treatment. This incident

underscores the dangers faced by firefighters in the line of duty and highlights the importance of effective communication during emergency situations. Further investigations may be necessary to assess operational protocols and enhance safety measures for future incidents.



Photograph 1 Alpha Side



Photograph 2 Alpha/Bravo Side View



Photograph 3 Bravo Side View



Photograph 4 Bravo Side View of Garage



Photograph 5 Charlie/Bravo View



Photograph 6 Charlie/Delta View



**Photograph 7 Living Room View
View**



Photograph 8 Living Room



Photograph 8 Helmet Camera View



Photograph 9 Helmet Camera View



PH-10 Helmet View of Ceiling Collapsing



PH-11 Helmet View of Ceiling Collapsing



PH-12 Ceiling Collapsing Upon Injured FF Ceiling



PH-13 Complete Collapse of

Contributing Factors

- *Burn Time – Fire load weakens structural members along with a large amount of water being applied will cause weakened framing.*
- *Situational awareness as related to expected building performance under fire conditions.*
- *Lack of Safety Officer*

Key Recommendations

- *Fire departments should ensure that a safety officer, independent from the incident commander, is appointed at working structure fires. (NFPA 1561, 8.13.1 and 8.13.2)*
- *Fire departments should ensure that firefighters are trained in situational awareness as related to expected building performance under fire conditions. (IFSTA 7th edition, Chapter 4, Fire Dynamics) NFPA 1001, 4.3.10, and 4.3.11)*



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Introduction

On Tuesday, June 13, 2024, Chief Investigator David Truax was notified by New Castle County (Fireboard) Communications that the Hockessin Fire Company experienced a Mayday during a structure fire. Two firefighters were transported to a local emergency department for injuries. Members of the Fire Commission's F.I.R.E Team responded to the scene of the incident. Investigators documented the scene by taking ground and aerial photographs. During the investigation, investigators interviewed both the injured firefighters and several other personnel. Investigators reviewed the following documents: New Castle County (Fireboard) CAD report, radio transmissions, fire school training transcripts, medical reports, and video footage from helmet cameras. The focus of this report is to determine the following: the root causes of the firefighter injury, if current training standards were followed by the firefighter(s); if the proper protective equipment including SCBA was utilized, and whether there was a command-and-control function.

Fire Department

The Hockessin Fire Company was established in 1936. The department is a combination department made up of 13 career staff and volunteers. The department is comprised of 1 Rescue Engine, 1 Ladder, 1 Tanker, and 2 Basic Life Support Units. (Ambulances) The fire company, in 2023 responded to 1,134 fire calls and over 2,000 EMS calls.

Training and Experience

The state of Delaware has the following requirements for volunteer firefighters. These requirements must be completed before an individual is allowed to participate in emergency responses and incident scene operations. Delaware Fire Regulations, Chapter 7, 1.0, minimum training requirements require the following training.

- Minimum training is required to ensure firefighters can safely and adequately perform functions at emergency scene operations. Fire Companies are required to track and maintain training records for all members. Members shall only be assigned duties commensurate with their training.

- For members to perform independently or as a part of a team, they must have completed the Delaware State Fire School curriculum or an approved equivalent training of basic fire skills, structural skills, hazmat response skills, and vehicle rescue.
- Members not yet trained at these levels must be closely supervised by trained members when operating at scenes. Members who are not trained in structural fire skills shall not be assigned interior duties at structural fires and may only participate as support personnel.
- Sufficient equivalency of training shall be determined by the Commission through the Director of the Delaware State Fire School (DSFS).

The Delaware State Fire School offers 16 different certifications through the National Board on Fire Service Professional Qualifications (Pro-Board) and the International Fire Service Accreditation Congress (IFSAC).

The following are Pro Board certifications for firefighters and fire officers:

DELAWARE FIRE FIGHTER I

- Basic Firefighting Skills (36 hours) or Fire I
- Structural Firefighting Skills (24 hours) or Fire II
- Hazardous Materials Response Skills or Fire II or Hazardous Materials I or II
- Fire Fighter Self-Survival
- Vehicle Rescue • Fire Fighter First Aid or Emergency Medical Technician (EMT)
- Or Pro-Board/IFSAC – Fire Fighter I plus – EMT

DELAWARE FIREFIGHTER II • Delaware Fire Fighter I PLUS • Firefighting Foam

- Rope Rescue I or Ropes and Rigging
- Arson Awareness or National Fire Academy's, Arson Detection for the First Responder
- Rapid Intervention Training - Introduction
- Crew Leader or Fire III AND • 4 Electives from list or Pro-Board/IFSAC – Fire Fighter II plus Crew Leader and 4 electives.

DELAWARE FIRE OFFICER LEVEL I

- Delaware Fire Fighter II PLUS
- Emergency Vehicle Operator (EVO)

- Driver Operator or Pumps
- DSFS Fire Officer I Course or Company Officer Course / Skills or Strategy AND
3 Electives from list or Pro-Board/IFSAC – Fire Officer I plus EVO and 3 electives

DELAWARE FIRE OFFICER LEVEL II

- Delaware Fire Officer Level I

DELAWARE ADMINISTRATIVE OFFICER I

- NFA - Leadership I
- NFA - Leadership II
- NFA - Leadership III AND
- 4 Electives from any list of electives

APPARATUS OPERATOR I

- Delaware Fire Fighter I or Introduction to Emergency Services
- DSFS Driver Operator Course
- Emergency Vehicle Operator Course
- Emergency Vehicle Operator Competency Course

The injured 30-year-old firefighter from Hockessin Fire Company has the following training through the Delaware State Fire School:

- Basic Firefighting skills
- Structural Firefighting Skills
- Hazardous Material Skills
- Emergency Vehicle Operator
- Firefighting Foam
- Crew Leader
- Vehicle Rescue
- Hazmat Operations
- Truck Company Operations
- Flammable liquids and Gasses

- Vehicle Anatomy
 - Water Rescue I II
 - Fit Testing
 - Basic Wildland Firefighting
 - RIT Training
 - Delaware Fire Officer I
 - Fire Ground Operations
 - AHA Instructor
 - BLS Protocols
 - Numerous BLS Training Classes
- The Firefighter met the minimum training standards to perform the task he was completing when injured.

The 24-year-old firefighter from Minquas Fire Company has the following training through the Delaware State Fire School:

- New Castel County Fire Recruit Class I
- Emergency Vehicle Operator
- Forcible Entry
- Radio 101
- Crew Leader
- Fire Ground Operations
- Water Rescue I, II
- Delaware Fire Officer I
- Driver Operator
- EMT
- BLS Protocols
- Incident Operations
- In-house structural Firefighting Evolutions
- Incident Command

The Minquas firefighter met the minimum training standards to perform the task he was completing when injured.

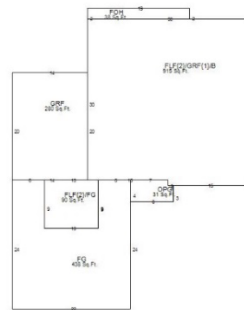
Injury

A 24-year-old firefighter from Minquas Fire Company suffered smoke inhalation after his mask was dislodged during firefighting operations. Although he managed to put the facepiece back on, he was unable to achieve a proper seal. As a result, he inhaled smoke from the moment the mask came off until he restored it. The firefighter exited the building unaided and was subsequently transported to Christina Hospital, where he received treatment and was later released. In another incident, a 30-year-old firefighter from Hockessin sustained injuries when debris from collapsing floor joists and ceiling fell on him. He was also taken to Christina Hospital for treatment and was admitted due to the severity of his injuries. These injuries have necessitated physical therapy as part of his recovery process.

Structure

The residence, built in 1987, is a two-story Colonial single-family dwelling with a gable roof. The dwelling is 2625 square feet, with 9 rooms, a 2-vehicle garage, a finished attic, and a 75% finished basement.

Residence Characteristics	
Residence 0	
Building Design: COLONIAL	Residence Class: SFD PLATTED LOT
Grade: GOOD	Condition: AVERAGE
Year Built: 1987	# Stories: 2
Total Area (sq. ft.): 2625	Main Floor Area: 1194
# Rooms: 9	# Bedrooms: 4
# 1/2 Baths: 1	# Full Baths: 2
# Fam. Rooms: 1	# Fixtures: 10
Roof Type: GABLE	Roof Material: ASPHALT
Exterior Wall: ALUMINIUM OR VINYL	Interior Wall Finish: DRYWALL
Floor Finish: CARPET	Foundation: CONTINUOUS
Garage Capacity: 2	Basement %: 75%
Basement % Finished:	Basement Finish Type:
Attic % Finished: 100%	Unfinished Area: 0
Unfinished %:	Air Conditioning: AIR CONDITIONING
Heat Type: HEAT-PUMP	
Remodel Year: 0	



Weather Conditions

11:51 AM	74 °F	50 °F	43 %	WNW	13 mph	20 mph	29.71 in	0.0 in	Mostly Cloudy
12:51 PM	77 °F	50 °F	39 %	WSW	14 mph	0 mph	29.68 in	0.0 in	Partly Cloudy
1:51 PM	78 °F	50 °F	37 %	W	16 mph	23 mph	29.66 in	0.0 in	Partly Cloudy
2:51 PM	76 °F	50 °F	40 %	WSW	15 mph	21 mph	29.65 in	0.0 in	Cloudy
3:51 PM	77 °F	50 °F	39 %	WSW	9 mph	0 mph	29.63 in	0.0 in	Mostly Cloudy
4:51 PM	79 °F	50 °F	36 %	W	9 mph	0 mph	29.63 in	0.0 in	Fair
5:51 PM	77 °F	49 °F	37 %	SSW	9 mph	0 mph	29.63 in	0.0 in	Partly Cloudy

Were Current Training and Standards Used

International Fire Service Training Association (IFSTA) 7th Edition Chapter 15 Overhaul Procedures instructs the firefighter not to stand directly under the area to be opened. The overhaul procedures chapter also highlights safety as being the first consideration of overhaul. When pulling ceilings from the underside of fire-damaged floor joists firefighters should recognize and prepare for the possible collapse of the floor joist above. This is highlighted in the Delaware State Fire School Structural Fire Fighting training program.

International Fire Service Training Association (IFSTA) 7th Chapter 10 Addition Recognition and Avoidance of Hazards -Air Emergencies states that firefighters must be prepared for the facepiece dislodging. The best way to prepare for this is to take a Firefighter Survival Class and practice in a safe training environment.

Was Proper Protective Gear Used (PPE)

The National Fire Protection Association (NFPA) 1971 plays a crucial role in safeguarding firefighting personnel by setting established minimum levels of protection against various hazards they face, including thermal, physical, environmental, and bloodborne pathogens, particularly during structural and proximity firefighting operations. Essential standards outlined in this regulation cover vital personal protective equipment (PPE), including helmets, gloves, boots, turnout coats and pants, and self-contained breathing apparatus (SCBA). It is important to note that both injured firefighters were equipped with all required personal protective gear at the time of the incident. Upon thorough inspection, the gear belonging to the Hockessin firefighter was confirmed to be compliant with NFPA 1851 standards, underscoring the

significance of adhering to these safety protocols to ensure the well-being of firefighting personnel in the line of duty.



Root Cause of Injury

In recent incidents, the importance of proper equipment usage and situational awareness among firefighters has come to the forefront. The injury sustained by the Minquas firefighter was primarily due to the dislodgment of his face piece. In environments filled with thick smoke, it is crucial that firefighters and their equipment maintain proper positioning. To ensure safety, every firefighter should undergo fit testing annually to confirm that their face piece is providing an adequate seal. Additionally, regular training on Self-Contained Breathing Apparatus (SCBA) air emergencies, particularly in smoke-filled conditions, is essential for preparedness and safety. Similarly, the injury reported among the Hockessin firefighters was attributed to a significant loss of situational awareness while performing ceiling pulls in areas heavily affected by fire. This highlights the need for firefighters to remain vigilant and aware of their surroundings, especially in high-pressure situations. Continued training and adherence to safety protocols are vital to reducing the risk of injuries in these challenging environments.

Was Proper Command Structure Utilized

There was a command structure present. Upon arrival, an officer from Hockessin Fire Company, Captain 20, took command and as additional Fire Chiefs arrived, they were placed into service as needed.

Was there a Command-and-Control Function

A command-and-control function was established to ensure effective management of the situation. Captain 20 from Hockessin Fire Company set up the command post across the street from the fire scene. To enhance operational efficiency, divisional commands were established as needed. As the fire ground operations progressed, radio communications faced interference while utilizing the 800 MHz frequencies. In response to this challenge, command directed all fire ground personnel to switch to talk groups that operate on simplex channels, ensuring uninterrupted communication for all units on site.

References

- New Castle County Fireboard Report. (CAD)
- New Castle County Fireboard Radio Transmissions
- Photographs/Videos-VariouS Sources
- Delaware State Fire Marshal 2023 Annual Report - [FY-2024-Annual-Report-FINAL.pdf \(delaware.gov\)](#)
- New Castle County Tax Map - [New Castle County, DE - Parcel # 0803010099 \(newcastlede.gov\)](#)
- Delaware State Fire School – Training Records and Curriculum [State Fire School - State of Delaware - Welcome to the Website for the Delaware State Fire School - Excellence Through Training](#)
- Google Maps - <https://www.google.com/maps>
- Incident Command System 300 Manual - <https://www.usda.gov/sites/default/files/documents/ICS300.pdf>
- NFPA – [NFPA LiNK® - 2020 NFPA-1561 - Chapter 5 Functions and Structure of Command](#)
- NFPA - [NFPA LiNK® - 2024 NFPA-1026 - Chapter 4 Incident Commander](#)
- Underground Weather -[Weather History & Data Archive | Weather Underground](#)
- Firehouse – Pulling Ceiling During Fire Attack. [Pulling Ceiling During Fire Attack | Firehouse](#)
- NIOSH -
- IFSTA 7th Edition -[Essentials of Fire Fighting, 7th Edition | IFSTA](#)

The objectives of the Delaware State Fire Prevention Commission are to protect the public, specifically, those persons who are the direct recipients of services regulated by this chapter, from unsafe practices. The State Fire Commission shall have the power to investigate injuries to firefighters sustained in the line of duty and issue reports of its findings and conclusions concerning such investigations. The Commission established an investigative team for those purposes known as Firefighter-Investigative-Review-Education ("The F.I.R.E. Team"). The F.I.R.E Team works in conjunction with the Delaware State Fire Commission Investigators, Delaware State Fire School, Delaware State Fire Marshal's Office, and other necessary agencies that may be needed to complete such investigation.

The program does not seek to determine fault or place blame for the injuries. Rather, the purpose is to determine factors that cause or contribute to firefighter deaths and or injuries sustained in the line of duty. Identification of cause and contributing factors enables researchers and safety specialists to develop strategies to prevent future similar incidents. This report represents a review of the situation at issue and a path forward toward safer practices for Delaware. This report is limited by the information known to the F.I.R.E. Team.

