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INCIDENT HIGHLIGHTS

DATE:
December 16, 2021

TIME:
2:18 AM

VICTIM:
30-year-old firefighter

INDUSTRY/NAICS CODE:
Fire Protection / 922160

EMPLOYER:
Municipal Fire Department

SAFETY & TRAINING:
IL OSHA noted deficiencies in communications and team continuity.

SCENE:
Multi-family dwelling

LOCATION:
Northeast Illinois

EVENT TYPE:
Fatality

INSPECTION #: 1569882 **REPORT DATE: 1/12/2024**

The Marmora Incident: Firefighter Seriously Injured and Later Dies After Loss of Accountability at a Residential Fire

SUMMARY

IL OSHA opened an inspection to investigate the death of a 30-year-old male firefighter who was separated from his team during fire suppression operations at a multi-family dwelling basement fire. The firefighter experienced an emergency and declared a mayday. He was located and removed from the structure by firefighters from multiple fire companies. Advanced life support and critical care measures were provided; however, the firefighter died five days later.

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- The initial fire suppression team did not enter together and stay together.
- No other members in the structure or on scene had communication with the firefighter when he suffered a life-threatening emergency.
- There was a delay between the firefighter in distress declaring a mayday and the incident commander confirming a mayday emergency.

RECOMMENDATIONS (DEFENSES)

To reduce the risk of similar occurrences:

- Interior teams go in as a team, stay in visual or voice contact, and leave as a team.
- Prior to entering a hazard zone, firefighters must perform a radio check to establish communication with a member outside the hazard zone.
- Company officers must provide close supervision of inexperienced members during high hazard operations.
- Incident commanders must treat a potential mayday as an actual mayday until proven otherwise.

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SUMMARY

On December 16, 2021, at 6:31 AM, the Illinois Department of Labor – Division of Occupational Safety and Health (IL OSHA) received notice of an occupationally related injury of a firefighter that occurred earlier in the morning. IL OSHA opened an inspection to investigate the circumstances involving a 30-year-old male firefighter found unresponsive and out of breathing air on the first floor of a multi-family residential structure after a mayday call. The firefighter was removed from the structure by firefighters from several fire companies of the involved department. The firefighter received advanced life support care, was transported to a nearby hospital, and was subsequently transferred to another hospital for critical care. Despite these measures, he succumbed to his injuries five days after the incident.

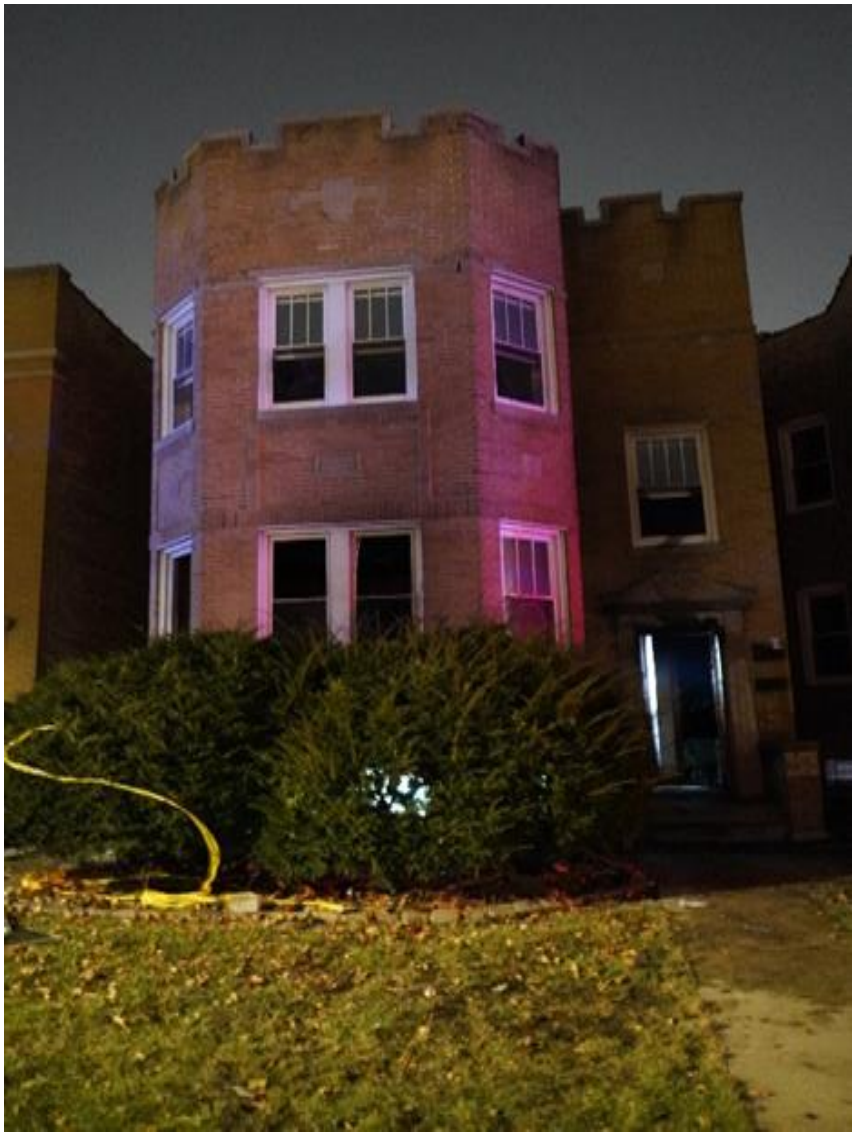

Figure 1 - "Alpha" side of residence after extinguishment (photo credit: affected department)

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BACKGROUND

The victim attended a local high school where he graduated in 2009. He attended an Illinois university and was the first person in his family to attend college. During that time, he took the police and firefighter exams for his home city and was offered a position to join the city fire department. He started at the city fire academy in December 2020 and graduated six months later. He was then assigned to a truck (ladder) company for approximately one month, and then an engine (pumper) company in July 2021 where he remained through December 2021. He worked a 24 hour on, 48 hour off schedule.

The municipal fire department is organized into five districts, 24 battalions, and over 110 facilities that are staffed with career personnel 24 hours a day. The department covers more than 228 square miles and responds to nearly 900,000 calls annually.

The involved structure was a 2,414 square foot multi-family dwelling with an occupied basement apartment. It was built in 1922 and is in the northwestern section of the city. The structure is approximately 1.5 miles from the victim's assigned fire station and has hydrant coverage.

Figure 2 - May 2019 photo of "Alpha" side of residence (photo credit: Google)

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INCIDENT

The department received a call reporting a fire at the involved residence in the early morning hours of December 16, 2021. The weather at the time was approximately 64 degrees Fahrenheit and windy, with gusts in excess of 40mph. A "still alarm" assignment of fire apparatus was dispatched. A pumper apparatus ("E1") with one officer and four firefighters (one firefighter being the victim) was first to arrive on scene at approximately 2:10:53 AM, just under six hours prior to the end of their 24 hour shift. The officer reported, "We're southbound, two-story, ordinary construction, nothing showing" over the main/dispatch radio channel. The E1 officer got out of the apparatus cab and approached the door located on the right of the front "Alpha" side of the residence and observed smoke. He ordered an attack line stretched to the front door. The victim ("FF#1") and another firefighter ("FF#2") from E1 stretched an attack line to the front door. The third firefighter went to a nearby hydrant to establish a water supply and the fourth firefighter served as the engineer. While FF#1 and FF#2 were stretching the attack line, the E1 officer donned his self-contained breathing apparatus ("SCBA") mask, hood, and helmet, and entered the building alone to find the source/seat of the fire. The E1 officer went through the front door and entered a small foyer. Directly ahead of him were steps leading up to the first floor on the left and steps leading down to the basement on the right. He went down the steps and observed a couch on fire. He then went back up the steps and instructed FF#1 (victim), assigned as the "pipeman," to bleed the attack line of air and go down the steps, and that the fire would be on the left. FF#1's SCBA event log (downloaded after the incident) indicated that he turned on the SCBA at approximately 2:13AM and his cylinder pressure was 4210psi. NOTE: 4210psi out of a 4500psi capacity cylinder is considered to be full.

Another pumper apparatus ("E2") and two ladder apparatus ("T1" and "T2") arrived between 2:11 – 2:12 AM. The T1 officer was met in the front of the building by a resident who stated that there were possible victims in the basement. A team from T1 went to the rear "Charlie" side of the structure, forced entry, and began search and rescue operations. They quickly located a female victim and removed her, re-entered, then located a male victim and removed him.

NOTE: A total of three civilians were rescued from the structure; two were critically injured and one did not survive.

A battalion chief ("incident commander") arrived on scene at approximately 2:15:40 AM and assumed the role of incident commander. Upon arrival, he reported to dispatch that it, "looks like I got a fire in the basement." The incident commander noted that he observed FF#1 (victim) "masking up" but did not observe him enter the building.

Meanwhile, the E1 officer went to the basement alone a second time and observed that visibility was poor. The room got "really hot," and it felt like his neck was burning. He waited for FF#1 to meet him in the basement with the attack line, but FF#1 did not arrive. The E1 officer then went back up the steps and heard the incident commander order personnel to pull out of the building and make an exterior attack due to rapidly worsening conditions. The E1 officer stated that he passed FF#1 in the foyer on his way out of the building.

While the E1 officer was in the basement, FF#2, assigned as the "heel" for the attack line, observed FF#1 near the residence's exterior front steps go "on air." FF#2 walked by FF#1 to go into the structure and ensure there would be no problems with advancing the attack line. FF#2 then exited the structure and walked back toward E1 following the attack line to ensure it was ready to be advanced. Conditions deteriorated and smoke on the outside of the structure reduced visibility to the point that FF#2 had to use the attack line as a guide to get back to the entrance of the structure and attempt to meet up with FF#1. FF#2 reached the nozzle of the attack line that was laying in the entry foyer. FF#2 noted zero visibility and opened the nozzle of the attack line to spray into the basement. FF#2 was then instructed by the E1 officer to exit the building and transition to an exterior attack (based on the incident commander's evacuation order). After these initial actions, FF#2 and the E1 officer conferred and determined that neither of them knew the current location of FF#1.

Figure 3- Entrance on "Alpha" side (photo credit: affected department)

Figure 4- Foyer area inside entrance (photo credit: affected department)

At approximately 2:16 AM, three minutes after turning on his SCBA, FF#1's SCBA event log indicated that system pressure was at 3385psi and rapidly decreasing. By 2:17 AM, FF#1's SCBA indicated a low air warning (50% air remaining) and just 15 seconds later indicated a low air alarm (35% air remaining). By 2:18 AM FF#1's SCBA cylinder was empty and at 2:19 AM FF#1 manually activated his personal alert safety system ("PASS") alarm.

Other companies had also heard the incident commander's evacuation order; however, it did not appear that the order was heard over the radio by all members on scene. The order was also passed along orally between members per department policy. After ordering personnel out of the structure and conducting a personnel accountability report ("PAR"), the incident commander was notified of a possible mayday. He attempted to acknowledge the mayday with two quick calls on the tactical/fireground frequency. The E1 officer had a face-

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to-face with the incident commander and reported that he did not have accountability of FF#1. At approximately the same time, FF#2 informed the T2 officer that FF#1 was missing. The T2 officer and another member from T2 entered the first floor to perform a search. The T2 member was not aware that he was searching for a lost firefighter; rather, he thought he would be searching for a civilian victim.

Another battalion chief assigned as the rapid intervention team chief ("RIT chief") arrived at approximately 2:18 AM. Before removing his seat belt, he heard "mayday mayday mayday" on the radio and described that it sounded like the actual mayday caller because the voice sounded distressed. The RIT chief had two radios on: a portable, and a unit mounted mobile. Both were scanning so he could not determine what channel the mayday transmission came from. He waited a few seconds for the incident commander to acknowledge the mayday, but no acknowledgement occurred. The RIT chief then, at approximately 2:19:15 AM, attempted to report to the incident commander, "they are calling a mayday" over the radio. The RIT chief realized he was transmitting on the main/dispatch channel and not the tactical/fireground channel. He switched to the tactical/fireground channel and repeated his report but did not receive acknowledgement. He then made face-to-face contact with two company officers on scene, informed them of the mayday, and then proceeded to locate the incident commander.

The third ladder apparatus to arrive ("T3") at approximately 2:20:10 AM, was the designated RIT company. Approximately three to four blocks from the scene the T3 officer noted chatter on the radio about a possible mayday. Once at the scene the officer went to the "Alpha" side to seek clarification on the mayday. He was not able to confirm an actual mayday until he met the officer of E1 who indicated that one of his firefighters, FF#1, was missing. The T3 officer and another member of T3 initiated a search for FF#1 on the first floor.

At approximately 2:21 AM, dispatch contacted the incident commander on the main channel and asked for a status update because "we had someone come over the radio asking for a mayday." This was presumably in reference to the report that the RIT chief inadvertently made over the main channel when attempting to notify the incident commander of the mayday call. At approximately 2:21:18 AM, the incident commander replied to dispatch that, "We have no mayday at this time, I'm conducting a PAR right now of all the companies on the scene."

At approximately 2:23:44 AM, the incident commander reported to dispatch that, "Just conducted a PAR we're short one member, emergency emergency emergency give me a box (alarm) I've put a RIT (team) to work get me another RIT company."

The T2 officer and a member from T2 had already begun searching for FF#1 (due to being informed by FF#2 that FF#1 was missing). This was after the RIT chief's transmission about a mayday at 2:19:15 AM, but prior to the incident commander's radio notification of an emergency at 2:23:44 AM. The team of two from T2 entered the first floor of the building and observed heavy smoke but no fire. The team split up on the first floor to conduct a search. The T2 officer heard a SCBA PASS in full alarm and crawled toward the sound. The other member of T2 began a search and heard the PASS alarm but did not react to it because he was not aware that

he was searching for a lost firefighter. The T2 officer located FF#1 approximately twenty feet into the building in the dining room. He was observed to be face down with his mask on his forehead (not properly seated) and his helmet was missing. The low air bell was not sounding and there was no air flow from the SCBA mask. The T2 officer assessed that FF#1 was not breathing and his eyes were closed. The T2 officer called for the other T2 member who quickly met up with him. The T2 officer also called for additional assistance on the tactical/fireground channel.

The T3 officer and another member of T3 were also searching for FF#1 on the first floor and heard a PASS alarm. They crawled in the direction of the alarm and encountered the two-person team from T2 with FF#1. They assisted T2 with removing FF#1 and noted that he was entangled in the dining room table and chairs. Teams from T2 and T3 along with members of other companies removed FF#1 from the building.

During the search for FF#1, a team from T1 located and removed the third and final civilian victim from the rear "Charlie" side of the building. The incident commander reported this to dispatch and requested an ambulance to go to the alley for the civilian victim at approximately 2:26:44 AM. The RIT chief stated that this occurred just prior to the T2 officer transmitting that he had located FF#1.

At approximately 2:31:39 AM, the incident commander transmitted to dispatch that, "fireman has been removed on side A" and that the firefighter (FF#1) was in the care of an EMS unit on scene. This corresponds to the SCBA event log that recorded the PASS alarm being silenced and the unit powered off at 2:31 AM.

FF#1 received advanced life support care, was transported to a nearby hospital, and was subsequently transferred to another hospital for critical care. Despite these measures, he succumbed to his injuries and died on December 21, 2021.

Mayday Incident Timeline (times are approximate)

2:10:53 AM	E1 on scene with a crew of five including FF#1.
2:13 AM	FF#1 SCBA turned on, breathing air pressure is 4210psi.
2:15:40 AM	Battalion chief arrives and assumes incident command.
2:16 AM	FF#1 SCBA starts rapidly losing breathing air (pressure 3385psi).
2:17 AM	FF#1 SCBA low air warning (50%), 15 seconds later low air alarm (35%).
2:18 AM	FF#1 SCBA has no breathing air (pressure 0psi).
2:18 AM	RIT chief arrives on scene.

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2:19 AM	FF#1 manually activates SCBA PASS alarm.
2:19:15 AM	RIT chief reports, “they are calling a mayday” over the main/dispatch channel.
2:19 – 2:23 AM	T2 team starts search for FF#1.
2:20 AM	T3 designated as RIT company arrives and attempts to confirm if there is a mayday.
2:21:18 AM	Incident commander declares no mayday, conducting PAR.
2:23:44 AM	Incident commander declares an emergency, one firefighter missing.
2:26:44 AM	Incident commander requests ambulance for a civilian victim removed from rear.
2:27AM – 2:28 AM	T2 officer transmits that he has located FF#1.
2:31 AM	Manual SCBA PASS alarm silenced, unit powered down.
2:31:39 AM	Incident commander reports that FF#1 has been removed from the building.

INVESTIGATION BY IL OSHA

IL OSHA opened an investigation for the incident as well as an inspection for the fire department. Information was gathered from public and private sources, employer and employee interviews, and photograph and audio evidence of the scene. Records, logs, and policy documents were also reviewed. The information was analyzed to establish a timeline of events and conditions to determine if any violations of the Illinois Occupational Safety and Health Act occurred.

The department has numerous written policies in place, including but not limited to, standard operating procedures on risk assessment, maydays, personnel accountability reports, rapid intervention teams, and basement fires. While it appears that most operations during the fire were conducted according to procedure, certain procedures were not followed.

- The department SOP on basement fires states that, “Company Officers must ensure that all members under their command are on the appropriate tactical channel.” It appears that for the crew of E1, this did not occur.

- The department SOP on structured risk management assessment states that, “Members must enter together, stay together, and exit together.” It appears that for the crew of E1, members entered separately and did not work in teams.

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- The department SOP on structured risk management assessment states that, “Members must constantly monitor tactical communications for critical radio reports.” It appears that some command officers, company officers, and firefighters on scene did not monitor communications for critical radio reports.

The department provided training records for command officers, company officers, firefighters, and the victim as requested by IL OSHA. A review of the records did not indicate any deficiencies.

The department provided information about the victim’s SCBA as requested by IL OSHA. A review of the information revealed that the victim encountered a significant SCBA emergency while operating at the fire. The department SCBA “daily & after use inspection” log shows that the SCBA assigned to the victim was personally inspected by the victim at the start of his shift on the morning of December 15, 2021. The victim recorded that the SCBA was “OK” across thirteen areas listed on the inspection sheet and noted the cylinder pressure at 4190psi. This check is corroborated by the SCBA event log that shows the SCBA was turned on, the system was charged, the PASS alarm was tested, and the system was bled off on the morning of December 15, 2021. The visual and function inspection that morning did not indicate any malfunctions or faults with the SCBA.

The SCBA event log also provides information from the incident and shows that the victim turned the SCBA on at approximately 2:13 AM on December 16th. The system pressure was recorded at 4210psi. For the next three minutes, the SCBA air consumption graph shows a gradual decrease in breathing air pressure indicating that the SCBA was in use. At approximately 2:16 AM (3385psi) an unknown event causes a rapid decrease in breathing air pressure. By 2:17 AM the low air warning activates indicating less than 50% air pressure is remaining. Just 15 seconds later the low air alarm activates indicating less than 35% air pressure is remaining. By 2:18 AM the SCBA is out of breathing air. Between 2:13 AM – 2:16 AM air consumption is roughly 275psi per minute. Between 2:16 AM – 2:18 AM air consumption increases to a catastrophic rate of roughly 1700psi per minute.

After the incident, the SCBA was confiscated by a command officer and provided to the department’s division of breathing apparatus services. The division performed a visual inspection, event log download, and flow test on the SCBA. The division report noted that the unit could not be flow tested in the present condition due to a damaged low-pressure hose. The low-pressure hose was replaced so the rest of the unit could be flow tested for proper function. The unit passed the flow test, however the facepiece failed the leak test as it was fouled with debris. The report notes that it is unknown how the damage occurred to the low-pressure hose, or when the fouling of the facepiece occurred.

Based on the information available, it appears that the SCBA performed normally until approximately 2:16 AM when the unit started to rapidly lose breathing air pressure. It is likely that this rapid loss is related to the damaged low-pressure hose. Photographs of the SCBA appear to show that the low-pressure hose is teared in

two places. One tear ("TEAR 1") is relatively close to the connection point between the hose and the regulator. The other tear ("TEAR 2") is at the connection point between the hose and the regulator.

Figure 5 - Post incident visual inspection of victim's SCBA (photo credit: affected department)

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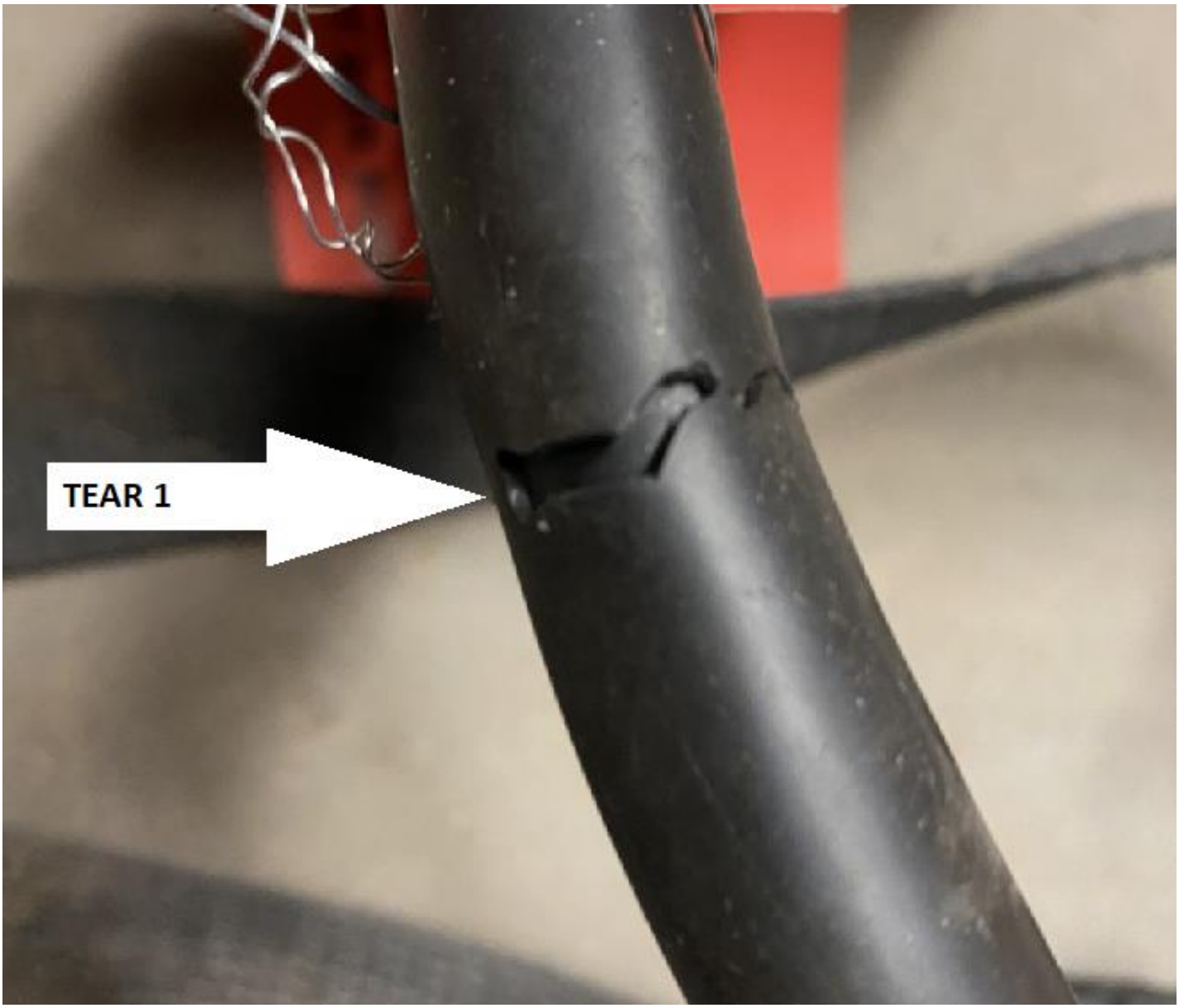

Figure 6 - Tear 1 close-up (photo credit: affected department)

Figure 7 - Tear 2 close-up (photo credit: affected department)

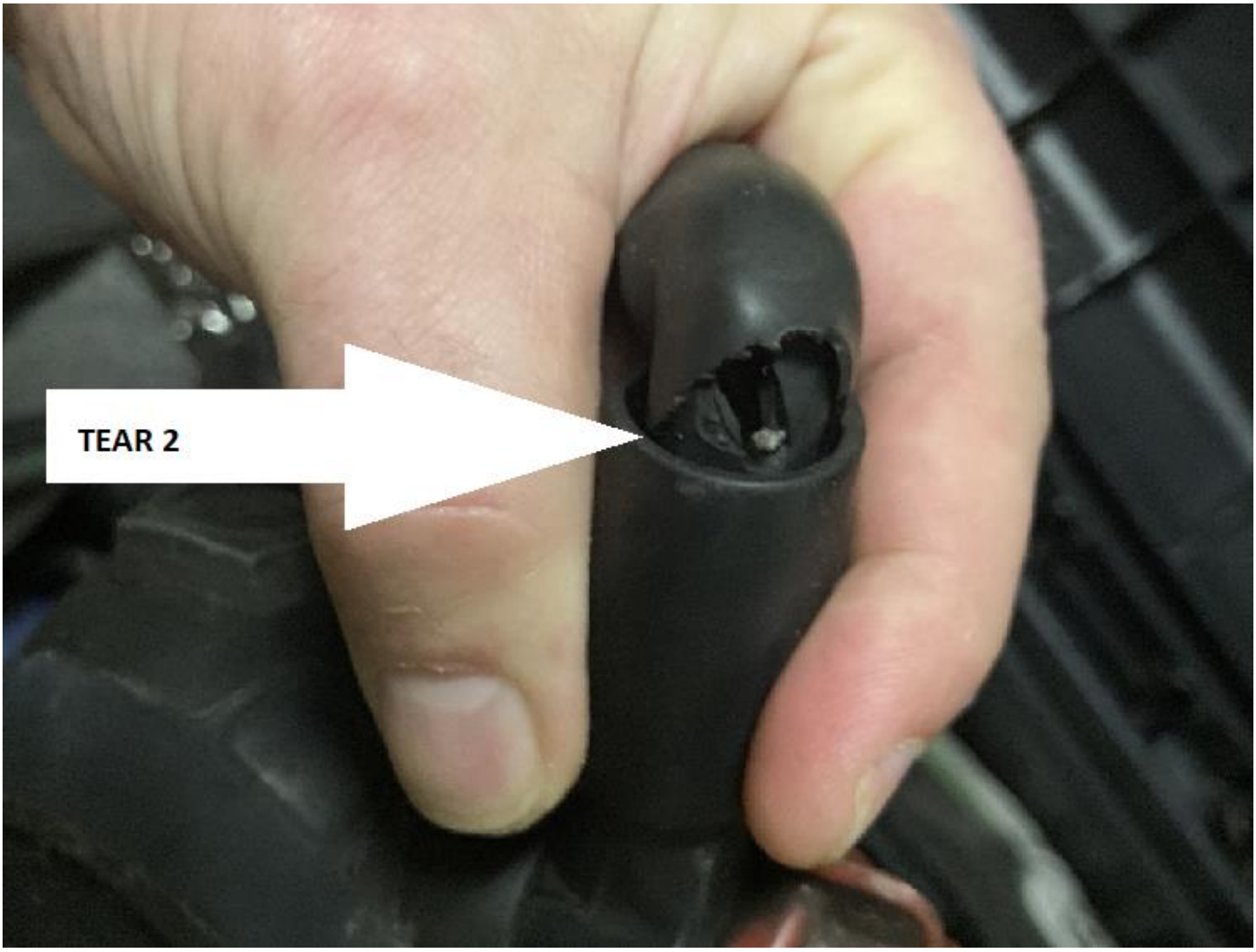

Figure 8 - Tear 2 close-up, hose pulled back (photo credit: affected department)

This rapid loss of air is one of the most serious SCBA emergencies that a firefighter could encounter. Once this emergency occurred, the firefighter only had approximately two minutes to perform emergency procedures to establish another source of breathing air, or to exit the structure before running out of air. It is highly unlikely that the victim, or any firefighter, would have been able to address this type of SCBA emergency by performing some type of corrective procedure to the SCBA while inside the structure.

IL OSHA could not determine what caused these tears that likely led to the rapid loss of breathing air. IL OSHA does presume that these tears did occur at approximately 2:16 AM since the SCBA performed normally during the morning inspection on December 15, 2021, and during the incident from approximately 2:13 AM until the rapid air loss event at approximately 2:16 AM.

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FINDINGS

Direct Cause: Exposure to respiratory hazards. The victim's breathing air supply was completely depleted. According to the coroner's report, death was attributed to complications of carbon monoxide toxicity and thermal injuries due to inhalation of smoke and soot.

Indirect Causes:

1. Based on evidence, firefighters from E1 entering the interior were not checked to see that they were operating on the designated fireground radio channel.

2. Close supervision of FF#1, who had only six months of field experience, was not provided by the E1 company officer.

3. Firefighters from E1 did not enter the structure together, stay together, and exit together.

4. FF#1 was not in direct visual or voice contact with another firefighter when he suffered a SCBA emergency involving the rapid loss of breathing air. As a result, no firefighters were able to immediately identify that FF#1 was experiencing a life-threatening emergency and provide assistance.

5. FF#1 had not established radio communication with a member outside the hazard zone. As a result, FF#1 was not able to receive immediate assistance after experiencing a life-threatening emergency.

6. The SCBA emergency experienced by FF#1 was so significant, it is unlikely that he, or any firefighter, could have corrected the situation and restored the SCBA to normal operation inside the structure.

7. The E1 company officer lost accountability of FF#1 for approximately ten minutes.

8. Most members on scene, including the incident commander and the E1 company officer did not hear FF#1's mayday call.

9. Once the RIT chief heard FF#1's mayday call on an unknown channel, there was a delay between receiving the call and the incident commander declaring a mayday emergency.

10. The mayday call did not include a unique identifier (or one was not heard by personnel).

11. Despite learning of a possible mayday call, the incident commander declared "no mayday."

12. Based on evidence, not all members operating on scene were aware of a mayday emergency.

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13. At least one member assigned to search for FF#1 was not aware that he was searching for a missing firefighter. He heard a PASS device in alarm but discounted it as a false alarm.

14. The third of three civilian victims were being removed from the building while firefighters were searching for FF#1 presenting a small degree of confusion.

15. Once located, FF#1 did not receive emergency breathing air.

CONCLUSION

This incident highlights the critical importance of firefighters entering a structure together, staying together, and exiting together. It is also critically important that firefighters establish radio communications with members outside a structure prior to entry, and that inexperienced firefighters have close supervision during high hazard operations. Additionally, the report of a potential mayday should be treated as an actual mayday until proven otherwise. With a team member and with established communications, FF#1 would have received immediate assistance when he experienced the SCBA emergency, significantly reducing the risk of serious injury.

RECOMMENDATIONS (DEFENSES)

Interior Firefighters:

- Perform radio check prior to entry.
- Teams enter together, stay together, exit together. No exceptions.
- Say your name when calling mayday, repeat until command confirms.

Rapid Intervention Teams:

- Immediately provide a downed firefighter with breathing air.
- One member of RIT is assigned as “air” firefighter.

Company Officers:

- Ensure their members are on the appropriate radio channel prior to entry.
- Ensure close supervision of inexperienced members.

Incident Commanders and Command Team Members:

- Establish radio communication with teams prior to entry.
- Have zero tolerance for interior firefighters operating alone.
- If an emergency (mayday, evacuation, collapse) is declared on scene, ensure all members on scene receive the message immediately.
- Treat any potential mayday as an actual mayday until proven otherwise.
- Ensure that PASS alarms are treated as firefighter distress alarms and combat the prevalence of false PASS alarms on the fireground.

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Fire Department Leaders:

- Program portable radios capable of providing a unique identifier with an emergency button that alerts members (including dispatch) outside the hazard zone of a firefighter in distress.
- Ensure company and command officers that are serving in acting roles have high quality training at the levels that they are temporarily expected to operate at.
- Ensure defenses identified by IL OSHA are captured in department policies.

CITATIONS

- ***Willful - 29 CFR 1910.134(e)(1): General. The employer shall provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. The employer may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.***

  On or about December 16, 2021, at a multi-family residential fire, the employer did not ensure that all firefighters who used a respirator (SCBA) were medically evaluated to determine their ability to use a respirator before they entered the immediately dangerous to life or health (IDLH) atmosphere. The employer could not provide a medical determination for the employee exposed to respiratory hazards during the fire.

  The employer was previously cited for a violation of this occupational safety and health standard or its equivalent standard in IL OSHA inspection number 1410875, citation number 1, item number 1 b. This citation was affirmed as a final order on August 7, 2019.

  Among other methods, one feasible and acceptable means of abatement would be to provide respirator medical determinations for members of the battalion who are designated to wear respirators. A signed Abatement Certification is required.

- ***Willful - 29 CFR 1910.134(g)(4): Procedures for interior structural firefighting. In addition to the requirements set forth under paragraph (g)(3), in interior structural fires, the employer shall ensure that: *At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times.***

  On or about December 16, 2021, at a multi-family residential fire, the employer, in multiple instances, did not ensure that at least two firefighters entered the immediately dangerous to life or health (IDLH) atmosphere and remained in visual or voice contact with one another at all times, exposing firefighters to respiratory and thermal hazards. One firefighter in an IDLH atmosphere was out of visual or voice contact with other firefighters for over 5 minutes.

  Among other methods, one feasible and acceptable means of abatement would be to: 1) frequently train members expected to serve as interior firefighters, company officers, and command officers on crew/company continuity, accountability, and this standard and; 2) for command and company officers

at structure fires to strictly enforce crew/company continuity, accountability, and this standard and; 3) ensure that any practices such as individual firefighters/officers conducting reconnaissance alone in an IDLH atmosphere are prohibited, and that this prohibition is enforced through supervision, corrective action, and commitment by department leadership. A signed Abatement Certification is required.

- ***Repeat – Serious 29 CFR 1910.134(g)(3)(ii): For all IDLH atmospheres, the employer shall ensure that: Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere.***

  On or about December 16, 2021, at a multi-family residential fire, the employer did not ensure that visual, voice, or line communication was maintained between firefighters in the IDLH atmosphere and members located outside the IDLH atmosphere, exposing firefighters to respiratory and thermal hazards.

  The employer was previously cited for a violation of this occupational safety and health standard or its equivalent standard, which was contained in IL OSHA inspection number 1204659, citation number 1, item number 1. This citation was affirmed as a final order on August 4, 2017.

  Among other methods, one feasible and acceptable means of abatement would be to: 1) Ensure members are on the appropriate radio channel prior to arrival on scene and prior to entering a hazard zone; and 2) Ensure members entering a hazard zone establish radio communication with a member(s) outside the hazard zone prior to entry. A signed Abatement Certification is required.

- ***Serious - 820 ILCS 219/20(a): Illinois Occupational Safety and Health Act. Every public employer must provide reasonable protection to the lives, health, and safety of its employees and must furnish to each of its employees employment and a workplace which are free from recognized hazards that cause or are likely to cause death or serious physical harm to its employees.***

  On or about December 16, 2021, at a multi-family residential fire, the employer did not provide reasonable protection to firefighters during command of a "mayday" call, exposing firefighters to respiratory and thermal hazards. 1) Once the RIT chief heard a mayday call on an unknown channel, there was a delay between receiving the call and the incident commander declaring a mayday emergency. 2) Despite learning of a possible mayday call, the incident commander declared “no mayday.” 3) Not all members operating on scene were aware of a mayday emergency.

  Among other methods, one feasible and acceptable means of abatement would be to: 1) If an emergency (mayday, evacuation, collapse) is declared on scene, implement measures to ensure all members on scene receive the message via radio immediately and; 2) Ensure incident commanders treat any potential mayday as an actual mayday until proven otherwise. A signed Abatement Certification is required.

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APPENDIX

IL OSHA closed this inspection on June 28, 2023 after verifying the department had implemented corrective actions for the violations issued on June 1, 2022. On request from IL OSHA, on December 19, 2023, the affected department provided a response to the original incident report dated May 25, 2022 in the interests of ensuring accuracy and to provide an overview of corrective actions taken since the incident. This incident report, dated January 12, 2024, has been amended based on feedback from the affected department.

The following is a summary of actions taken, or in progress, since the incident according to the affected department:

A safety memo was issued ordering all SCBA hoses to be reexamined prior to use.

The SCBA manufacturer was contacted to alert them about the malfunction. Per the manufacturer, no large-scale defect was found, and the break in the hose was not replicable in testing.

The respirator medical evaluation process was updated to ensure it meets IL OSHA standards.

The emergency radio communication system was upgraded, additional portable radios were purchased, and the emergency alert button (“EAB”) function on portable radios was enabled for an additional mayday notification capability. Training on radio communications was conducted in classroom and simulated live-fire environments.

A third-party data management system tailored to the fire service was purchased to better manage training, certifications, and safety checks.

A pilot program is under development for a mobile training team dedicated to specialized training in the field.

The department is engaging with the affected labor union to create a working group dedicated to various health and safety concerns.