NEW JERSEY DIVISION OF FIRE SAFETY

Firefighter Fatality and Serious Injury Report Series

Firefighter Killed and Multiple Firefighters Injured Following a Floor Collapse during a Structure Fire

Franklin Twp. (Somerset County), New Jersey
April 11th, 2006

Report Issued
September 21, 2007

STATE OF NEW JERSEY
Jon S. Corzine, Governor

DEPARTMENT OF COMMUNITY AFFAIRS
Charles A. Richman, Acting Commissioner

DIVISION OF FIRE SAFETY
Lawrence Petrillo, Director

TABLE OF CONTENTS

INTRODUCTION

The investigation of this incident was conducted by the New Jersey Division of Fire Safety / Office of the State Fire Marshal in conjunction with the New Jersey Department of Labor. This report was prepared in accordance with N.J.S.A. 52:27D – 25d, Duties of the Division. The purpose of these firefighter casualty investigations is to report the causes of serious firefighter injuries or deaths and identify those measures which may be required to prevent the future occurrence of deaths and serious injuries under similar circumstances. In some cases new information may be developed, or old lessons reinforced, in an effort to prevent similar events in the future.

Comments and/or inquiries concerning this report may be addressed to the address listed below:

New Jersey Department of
Community Affairs
Division of Fire Safety
101 South Broad Street
P.O. Box 809
Trenton, NJ 08625-0809

EXECUTIVE SUMMARY

On April 11, 2006 the East Franklin and Community Volunteer Fire Departments (EFFD and CFD, respectively) responded to a possible single-family dwelling fire at 36 Whittier Avenue, Franklin Township, Somerset County, NJ. EFFD Chief Dan Krushinski responded and was notified while still enroute that the police department was on scene reporting a working fire. When Chief Krushinski arrived on scene he reported a well-involved fire. He immediately requested a 2nd alarm assignment be dispatched and directly contacted the neighboring New Brunswick Fire Department (NBFD) to request their assistance. Chief Krushinski and police officers confirmed that an elderly female resident was still inside the home.

EFFD Squad 27 (SQ-27) was first to arrive on scene and the crew was instructed to enter the structure for search and rescue operations. They deployed a 1-3/4" hoseline through the front door and advanced to the right side of the structure toward the bedrooms, as that is where the woman was reported to be located. NBFD Ladder 1 (L-1) arrived on scene shortly thereafter and their crew was instructed to assist with the search and rescue operations. When the victim was located by interior personnel, they began to pull her back toward the front door to exit the structure.

Approximately 15 minutes after dispatch, as the members of the interior crew were nearing the front door, the floor suddenly collapsed, causing the rescue personnel and resident victim to fall into the basement. The front of the home immediately erupted into heavy fire conditions from the collapsed floor area. A garbled "Mayday" message and yelling was then heard over the fireground radio frequency. Chief Krushinski radioed that he had firefighters down and immediately requested a 4th alarm assignment be dispatched. Chief Krushinski did not immediately know which or how many firefighters were trapped in the burning basement. As personnel deployed additional hoselines to knock-down the heavy fire coming from the basement, a small folding ladder was placed into the collapsed area to reach the trapped firefighters. Three firefighters were eventually rescued from the basement. However, it was thought that more personnel were trapped, and a PASS alarm was heard from the basement area.

Personnel entered the basement, but found great difficulty operating there due to a high water level from the hoselines, as well as the collapsed floor area blocking their access. Pumps and saws were used to gain access to the trapped firefighter, later determined to be FF Kevin Apuzzio. Crews reached him 50 minutes after dispatch, and worked exhaustively to remove him nearly an hour-and-a-half after dispatch.

Following the removal of FF Apuzzio from the basement, the initial companies on scene were relieved of their firefighting duties by the extensive amount of mutual aid companies that had responded. Firefighting operations continued without

further incident until the fire was completely extinguished later that morning. The body of the deceased female resident, and multiple pieces of firefighting equipment, were later recovered from the basement area by investigators during their scene investigation.

The origin and cause investigation for this incident was conducted jointly by investigators from the Somerset County Prosecutor's Office, the NJ State Police Arson / Bomb Unit, and the NJ Division of Fire Safety Arson / K-9 Unit. According to the final report authored by the Somerset County Prosecutor's Office, the exact cause of the fire was not able to be determined but the fire originated in the area between the floor joists between the basement ceiling and the living room floor above.

In order to minimize the risk of similar incidents, the New Jersey Division of Fire Safety identified key issues that must be addressed and remedies that should be implemented within all departments.

1. **FACTOR:** The personnel accountability system utilized by the EFFD was not capable of effectively tracking the location, function, and time of personnel operating at the incident scene.

   REMEDY: *Fire departments shall adopt and utilize a personal accountability system that is compliant with the current IMS regulations under N.J.A.C. 5:75. Departments shall further designate personal accountability officers (PAOs) to monitor each entry point into a structure so as to monitor the locations, functions, and times of personnel.*

2. **FACTOR:** At the time of the collapse there was a radio transmission made that was later believed to be a "Mayday" call from an interior crew member who was not able to be identified during the investigation of this incident. The quality of the radio transmission was so poor however that it was nearly unintelligible.

   REMEDY: *It is recommended that fire departments train all personnel on procedures for issuing an "Emergency Traffic" radio transmission and also on the proper actions to be taken following the receipt of an "Emergency Traffic" radio transmission.*

3. **FACTOR:** The person who called 9-1-1 to report the fire stated that there was a fire in the basement of the structure. However, this information was not relayed to the incident commander (IC) or the responding units.

   REMEDY: *It is vital that the 9-1-1 Center get and transmit all relevant information to the IC and other responding units. Equipped*

with this information, the IC can make informed decisions regarding the formulation of the incident action plan.

4. **FACTOR:** Chief Krushinski reported that upon his arrival he was unable to conduct a 360^0 size-up of the structure due to fences on the sides of the home.

REMEDY: *If at all possible, a complete size-up of the fire scene should be conducted by the IC. The observations made by the IC will allow for the identification of hazards, building characteristics and fire conditions so the best risk / benefit analysis can be conducted in order to provide for the maximum level of safety for firefighters while allowing for the most efficient operations possible.*

5. **FACTOR:** At this incident only two company officers were present during the initial stages of the incident to supervise company operations. This was due mainly to the fact that the fire occurred on a weekday (Tuesday) during daytime hours when members of volunteer fire departments are on their way to their full-time jobs; many times away from their town of residence. This resulted in the inability to immediately staff all necessary positions of the incident management system.

REMEDY: *Volunteer fire departments must routinely rely on mutual aid from neighboring departments due to lower levels of staffing during daytime hours. In this case it was not a shortage of firefighters but rather a shortage of officers that hampered the fire department's operations. It should be noted that Chief Krushinski did call for mutual aid which eventually brought additional company officers to the scene as well as needed firefighters and apparatus.*

6. **FACTOR:** It was found that the tongue and grove hardwood flooring of the dwelling had been overlaid at some point with another layer of tongue and grove hardwood flooring. This arrangement of floor boards served to provide solidity to the floor, but not the ability to bear the weight of five firefighters and the female victim after floor joists below had burned through.

REMEDY: *Emergency responders must try to anticipate a wide range of dangerous conditions in and around private residences. It is critical that firefighters avoid complacency when responding to fires in such occupancies, and remain vigilant for conditions that will cause them to alter normal fireground tactics and strategies.*

36 Whittier Avenue – View from Side "A"

INVESTIGATION

Pursuant to New Jersey Incident Management System regulations, to provide for uniform identification of locations and operational forces within an incident scene, the scene is divided geographically into smaller parts which are designated as divisions. Specific areas of the incident scene are to be designated as follows:

- *Sides of incident scenes shall be identified as letters of the alphabet beginning with the letter "A."*
- *The side of the incident scene that bears the postal address of the location shall be designated as Division "A" by the Incident Commander. Where the incident scene has no postal address, the Incident Commander shall select any side to designate Division "A"*
- *Continuing in a clockwise rotation, the side adjacent to the Division "A" side shall be designated as Division "B." The side adjacent to the Division "B" side shall be designated as Division "C." The side adjacent to the Division "C" side shall be designated as Division "D."*
- *Floor levels shall be designated as Division "Basement" or "0"; "1" (ground level – not necessarily street level); "2", "3", and so on.*

The Incident

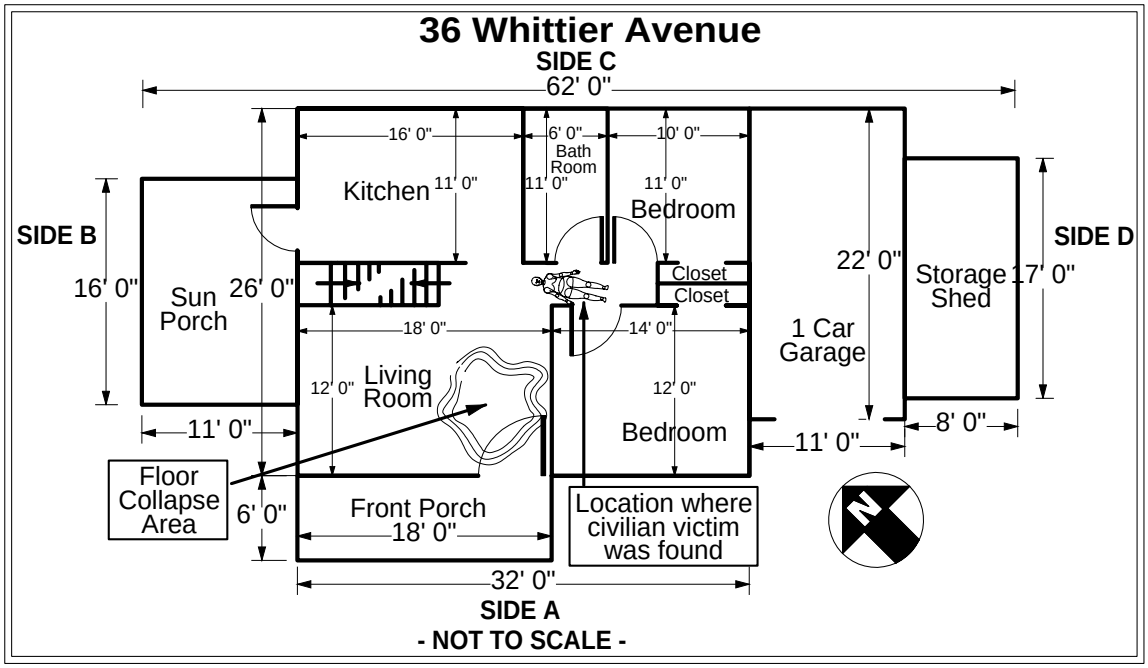
On April 11, 2006 at 0612 hours, Franklin Twp. Fire District 3 was dispatched to a possible house fire at 36 Whittier Ave. Fire District 3 consists of the East Franklin (EFFD) and Community (CFD) Volunteer Fire Departments, which respond together on all incidents. EFFD Chief Dan Krushinski responded at

0613 hours (1 minute after dispatch), and was updated while still enroute that the police department was on scene reporting a working fire. Chief Krushinski then had the incident re-dispatched as a working house fire, and arrived on scene at 0616 hours (4 minutes after dispatch) reporting a well-involved fire. He immediately requested a 2nd alarm assignment be dispatched and directly contacted the New Brunswick Fire Department (NBFD) over the radio for them to respond with an Engine (E) and Ladder (L) to the scene. Within minutes, NBFD L-1 and E-1 were responding. At 0617 hours (5 minutes after dispatch), Chief Krushinski and police officers confirmed that an elderly female resident was still inside the home.

EFFD Squad 27 (SQ-27) responded at 0618 hours (6 minutes after dispatch), followed by CFD E-253. SQ-27 was first to arrive on scene at 0619 hours (7 minutes after dispatch); the crew was instructed to enter the structure for search and rescue operations. They deployed a 1-3/4" hoseline through the front door and advanced to the right side of the structure toward the bedrooms, as that is where the woman was reported to be located. E-253 arrived on scene at 0620 hours (8 minutes after dispatch), and was instructed to lay a water supply line from a nearby fire hydrant to SQ-27, however they radioed that the police cars were initially blocking their approach. Also at 0620 hours, EFFD E-278 radioed that they were responding; although they never radioed on scene, it can be reasoned that they arrived at approximately 0621 hours (9 minutes after dispatch) due to the proximity of the incident to the firehouse. All indications are that they arrived on scene just as the SQ-27 crew was beginning to make entry into the structure. The crew of E-278 was instructed to ventilate the front of the structure and deploy a second 1-3/4" hoseline off SQ-27 to back-up the interior crew.

NBFD L-1 arrived on scene at 0623 hours (11 minutes after dispatch); half their crew went inside to assist with the search operation, and the other half placed a ground ladder to the roof and cut a ventilation hole with a saw. The victim was located by interior personnel approximately 12 feet from the front door at 0626 hours (14 minutes after dispatch); they began to drag the unconscious victim back toward the front door to exit the structure. NBFD E-1 arrived on scene at 0627 hours (15 minutes after dispatch). At about this same time, two members of the interior crew were coming out through the front door, with additional personnel pulling the victim right behind them.

Just inside the front door, the victim became hooked on something, preventing the crew from exiting. As they tried to free her, the floor suddenly collapsed, dumping the personnel and resident victim into the basement. The front of the home immediately erupted into heavy fire conditions from the collapsed floor area. A garbled "Mayday" message and yelling was then heard over the fireground radio frequency. It should be noted that the collapse occurred approximately 15 minutes after dispatch, and 6 minutes after firefighters first entered the structure.



Chief Krushinski radioed that he had firefighters down at 0628 hours (16 minutes after dispatch), and immediately requested a 4th alarm assignment be dispatched. Chief Krushinski did not immediately know which or how many firefighters were trapped in the burning basement by fallen debris. He then radioed for NBFD Deputy Chief (DC) Nick Grischuk to respond to the scene to assist him with operations. As personnel deployed additional hoselines to knock-down the heavy fire coming from the basement, a small folding ladder was placed into the collapsed area to reach the trapped firefighters. The 2nd alarm Firefighter Assistance and Search Team (F.A.S.T.) from the Somerset Fire Department (SFD) arrived on scene at 0632 hours (20 minutes after initial dispatch); they immediately assisted with the rescue operation on the Division A side.

FF Nick Recine (from E-278) was first to emerge from the collapsed area; it was reported that he was reaching up toward the door threshold when personnel grabbed him and pulled him out of the basement. FF Brandon Shannon (from SQ-27) was next to exit, climbing up the ladder placed into the basement. He yelled that he dragged FF Ryan Daughton (from SQ-27) to the bottom of the ladder but he was unconscious. Personnel descended the ladder and retrieved FF Daughton, pulling him from the basement.

As previously stated, it was not immediately known which or how many firefighters were still inside the structure. Chief Krushinski later reported that he did not know the location of the NBFD personnel who initially entered the structure, and he believed that a NBFD Captain was unaccounted for. He stated that although he saw firefighters being treated by EMS personnel, they never reported to him who they were treating and/or transporting to the hospital. He reported seeing FF Apuzzio's helmet outside the structure, leading him to believe that he had gotten out (it was later determined that FF Recine somehow had FF

Apuzzio's helmet on upon exiting the basement). Chief Krushinski attempted to conduct a head-count for accountability of personnel, and instructed personnel to continue rescue operations. Crews reported hearing a PASS alarm sounding from the basement area. It was believed at the time that all NBFD personnel were accounted for, however, the PASS alarm was still sounding. Personnel attempted to access the basement via the interior stairway on the Division B side, and through a window on the Division C side. During this time, the fire went nearly unchecked until additional mutual aid units arrived, as all initial personnel were now conducting rescue operations.

FF Apuzzio was located by rescue personnel in the basement at 0702 hours (50 minutes after dispatch). Crews had great difficulty in accessing him due to being blocked by the collapsed floor area in addition to high water levels in the basement from the prolonged hoseline operations. They deployed portable pumps to de-water the basement, and used several saws to cut through the collapsed debris, necessary due to the saws stalling out from the water. Upon reaching him, a rope was tied to him, and personnel pulled him from the basement. FF Apuzzio was removed from the structure at 0739 hours. This came 1 hour 27 minutes after dispatch, and 37 minutes after initially locating him. It was reported that he had all of his turnout gear on, except for his helmet as previously noted.

Following the removal of FF Apuzzio from the basement, the initial companies on scene were relieved of their firefighting duties by the extensive amount of mutual aid companies that had responded. Firefighting operations continued without further incident until the fire was completely extinguished later that morning. The body of the deceased female resident, and multiple pieces of firefighting equipment, were later recovered from under a great deal of fallen debris in the basement area by investigators during their scene investigation.

The Casualty Scenario

Firefighter Kevin Apuzzio was a 21 year old member of the East Franklin Fire Department with approximately three years of certified firefighting experience. FF Apuzzio became trapped in the basement area for a prolonged amount of time following the sudden floor collapse. He was pronounced dead following his removal from the structure. An autopsy performed by the Regional Medical Examiner's Office in Newark listed his cause of death as smoke inhalation and thermal burns. The toxicology report noted a carboxyhemoglobin level of 38% in his blood. Serious toxicity is often associated with carboxyhemoglobin levels above 25%.

Firefighter Ryan Daughton was a 22 year old member of the East Franklin Fire Department with approximately four years of certified firefighting experience, including three years in New York State. FF Daughton received smoke inhalation upon running out of air while still inside the basement, as well as localized 2nd and 3rd degree burns to his wrist and buttocks areas. He was treated at a local hospital prior to being transferred to The Burn Center at St.

Barnabas Hospital in Livingston for two days of treatment.

Firefighter Matt Desmond was a 22 year old member of the East Franklin Fire Department with approximately four years of certified firefighting experience. FF Desmond received localized 2nd degree burns to his wrist and ankle areas; he was treated and released from a local hospital.

Firefighter Nick Recine was a 20 year old member of the East Franklin Fire Department with approximately two years of certified firefighting experience. FF Recine received a localized 2nd degree burn to his wrist area; he was treated and released from a local hospital.

The civilian female victim's cause of death was listed as smoke inhalation. The toxicology report noted a carboxyhemoglobin level of 90% in her blood.

ANALYSIS

Initial Incident Information

It should be noted that the 9-1-1 caller stated that there was a fire in the basement of the structure. However, this information was not relayed to the responding units. A recording of the 9-1-1 call also revealed that a language barrier between the caller and the operator may have contributed to a slight delay in obtaining the correct incident location and details of the incident. Additionally, the 2nd alarm request was mis-dispatched by the 9-1-1 operator in that the incorrect mutual aid companies were initially dispatched. This error was almost immediately realized by Chief Krushinski who notified the dispatcher as to the correct mutual aid assignment and the correction was made.

Scene Size-Up

Chief Krushinski reported that upon his arrival he was unable to conduct a 360^0 size-up of the structure due to obstructions on the sides of the home. Photos of the scene revealed there was a 3' high chain link fence on Side D directly against the storage shed adjacent to the neighboring property line. On Side B of the structure there was a small wooden lattice fence. Both fences had gates for entry to the rear of the structure.

Officer Staffing

At this incident it was reported that only two company officers were present during the initial stages of the incident to supervise company operations. This was due mainly to the fact that the fire occurred on a weekday (Tuesday) during hours when members of volunteer fire departments are typically on their way to their full-time jobs; many times away from their town of residence. This resulted in the inability to immediately staff all necessary positions of the incident management system. It must be noted that Chief Krushinski called for mutual aid which brought additional company officers to the scene as well as needed firefighters and apparatus.

Personal Accountability System

A personal accountability system is utilized to provide the IC with an improved means of tracking the location, function, and time of personnel operating at the incident scene.

At the time of the fire, EFFD utilized a 2-tag accountability system in which one tag was kept on the firefighter's turnout gear at all times, and the other tag was placed on a ring in the apparatus.

Although this system could track personnel that are on the incident scene, and which apparatus they responded on, it does not allow for the tracking of their specific location or assignment at an incident scene. Although each apparatus has riding assignments based on seating positions, these assignments frequently change or overlap once on the scene. This fact may have delayed the rescue operation for the downed firefighter because it was not immediately known that he was missing.

Additionally, EMS personnel on scene treating the injured firefighters removed from the collapsed floor area were not properly integrated with the EFFD's personnel accountability system. Firefighters were quickly removed from the area for treatment without being properly accounted for regarding their removal from the building. This added to the confusion about who had been removed and who was still missing.

"Mayday" Radio Transmission

At the time of the collapse there was a radio transmission made that was later believed to be a "Mayday" call from an interior crew member who was not able to be identified during the investigation of this incident. The quality of the radio transmission was so poor however that it was nearly unintelligible; it sounded merely like garbled yelling into the radio.

Building Considerations

Building and occupancy characteristics can play a significant role in both fire spread and personnel safety during incidents. Given this incident, some characteristics specific to this structure that played a role in this incident are as follows:

- *Flooring overlay* - It was found that the tongue and groove hardwood flooring of this dwelling had been overlaid at some point with another layer of tongue and groove hardwood flooring. The planks of the top layer of the floor were installed in a direction opposite from the lower layer. This arrangement of floor boards served to provide solidity to the floor, but not the ability to bear the weight of five firefighters and the female victim after floor joists below had burned through. As the initial crews of firefighters entered the structure, it was reported that they were "sounding the floor" utilizing the nozzle of the hose. Sounding the floor is a process by which firefighters pound on the floor, typically with a heavy tool, to assess the structural integrity of the floor. It was reported by all the firefighters who entered the structure that the floor seemed

solid to them. Additionally, the floor joists beneath the flooring were of 2" x 8" construction, considered by today's building standards as sub-par.

- *Number of persons in the structure* - Initially, three firefighters entered the structure to begin rescue operations. They were followed in by two additional firefighters. They proceeded in two separate groups until they reached the victim. At this point both teams converged and began bringing the victim to the front door. The combined weight of five firefighters; each most likely over 200 lbs with gear, and the victim may have contributed to the collapse of the floor which had been weakened by the fire.

Critical Incident Stress Debriefing (CISD) Team Use

The purpose of a CISD Team is to provide individual counseling, group sessions and, if necessary, referrals to members of an emergency response organization involved in traumatic events. These events include death or serious injury of a co-worker, multiple deaths, or the death of a child. The teams are made up of specially trained fire, police and EMS personnel, along with mental health professionals who provide training and guidance to the team members and assist at the debriefing sessions. The assistance provided by the CISD Team helps to sensitize the firefighters to the possibility of stress reactions, hopefully avoiding future stress related problems. It allows the members to understand the range of normal reactions and provides a method to deal with the incident and its after-effects. CISD Teams are regionalized in New Jersey and are part of a statewide network.

Public Employees Occupational Safety & Health (PEOSH) Inspections

Following this incident, an investigation was performed by the NJ Department of Labor and Workforce Development (NJ DOLWD) PEOSHA Unit. No violations were cited with respect to this incident.

LESSONS LEARNED

Utilizing Scene Size-Up to Perform Risk / Benefit Analysis for Determining Operations

The basic principle for firefighting is that human life must take precedence over all other concerns. A risk / benefit analysis must be conducted by the IC and also by all firefighters on the fireground prior to conducting all operations; the risk of an action needs to be weighed against the probable benefit that may be reasonably and realistically expected. Complete size-up of the fire scene by the IC and providing the IC with all pertinent information, especially that information given to the 9-1-1 center from the callers reporting the fire is vital. With this information the IC can then make the best risk / benefit analysis and formulate an action plan that will provide for the maximum level of safety for firefighters while allowing for the most efficient operations possible.

In this particular case however, if a full 360^0 size-up had been done by the IC and/or all known information regarding the fire had been relayed to the IC, it is doubtful that an action plan differing from the one used would have been developed. On face value, firefighters were presented with a fairly straight forward situation; that of a victim well within their reach on the first floor, a fire issuing a lot of smoke, but not showing much flame, and a floor, that upon entry seemed by all accounts to be structurally sound.

Firefighters used all the tools that were available to them in order to perform the operations safely; adequate hoselines, a thermal imaging camera, and self contained breathing apparatus coupled with appropriate turnout gear. Additionally, they had something that many departments operate without: adequate staffing to accomplish the task. They simply had no way of knowing that the floor joists below them had burned to the extent that they did, thus weakening the floor.

Building Considerations

Fires that occur in one and two family residences may be some of the most hazardous for firefighters to battle, as these structures do not possess the same life safety or construction design features as commercial structures, nor are they subject to any regular fire safety inspections after initial occupancy. It is for this reason that firefighters must anticipate a wide range of dangerous conditions in private residences including hazardous materials storage and inappropriate construction/alterations that may weaken a structure. Further, firefighters must utilize proven methods to assess building integrity such as sounding floors with appropriate tools, utilizing thermal imaging cameras to locate concentrations of

fire that may have weakened structural members, and visually identifying building characteristics learned in building construction training.

Personal Accountability System

Regulations for the NJ Personal Accountability System (NJPAS) under N.J.A.C 5:75 require that fire departments utilize a two-tag accountability system. The first tag is placed by the firefighter on the responding apparatus or a central collection point, and the second tag is given to a designated accountability officer prior to entering the immediately dangerous to life and health (IDLH) atmosphere. This system includes the use of Personal Accountability Reports (PARs) / roll calls, all within the framework of the IMS that is required to be utilized at all incidents.

The NJPAS is more than simply handing tags to the designated officer. It is also a system that requires communication between crews working inside the structure or hazardous area and company officers and the IC. Interior crews must continually apprise their company officers regarding conditions, location, and what they are doing. At the same time, company officers responsible for crews must solicit information from their crews and pass it along to the IC or planning chief. With proper two-way communication, everyone on the incident scene is cognizant of what each team is doing and generally has a sufficient idea of where they are, thereby lessening the chances of firefighters freelancing or being unaccounted for.

It is also imperative that other agencies on the incident scene become integrated into the accountability system and have a clear understanding of how the system works and their responsibilities within the framework of the system.

"Emergency Traffic" Radio Transmission Procedures

Firefighters must be taught that if they become lost or trapped the most important thing they can do is notify others of their plight and their best guess of their location. For this reason, every interior crew should be equipped with a portable radio equipped with a sufficient number of operational frequencies as well as a dedicated command frequency. Utilizing their radio, they need to notify the incident commander of their situation using a pre-determined emergency term such as *"Emergency Traffic,"* (formerly referred to as a "Mayday" transmission) and giving their name, location, and nature of the problem. Additionally, firefighters need to immediately activate their PASS devices manually so as to help rescue crews locate them quickly, and all non-essential radio transmissions should cease so that the IC or rescue personnel can communicate with the distressed firefighter(s). It may very well have been impossible for FF Apuzzio to employ these measures due to his particular circumstances; however, in general, firefighters must be familiar with and train on these procedures.

Emergency Care of Firefighters

While it was found during this investigation that the medical care could not have saved FF Apuzzio, it is important to note that the NJ Department of Health and Senior Services (NJ DOH) has issued a guide book, "Emergency Management Considerations for Firefighters" (also known as the "Pink Book") to the emergency departments of all hospitals in the State. This book covers the proper medical procedures and considerations for treating and/or stabilizing various firefighter injuries. It should be noted that the NJ DOH is currently updating the "Pink Book", and changing the title to "Guidelines for the Emergency Care of Firefighters". All FDs should check their local hospitals to ensure that emergency room staff do possess, and are familiar with, this guide book.

In accordance with American Burn Association recommended guidelines, and in keeping with the policies of The Burn Center at Saint Barnabas, a certified burn treatment facility for care and transport of burn patients, all individuals meeting the following criteria should be referred to the nearest certified burn center:

- *All Partial thickness (2nd degree) burns ≥10% total body surface area*
- *All Full thickness (3rd degree) burns, regardless of size*
- *All chemical, inhalation and electrical burns*
- *Any burns to the face, feet, joints or genitalia*
- *Patients with pre-existing medical disorders compromising outcome*
- *Patients with burns and concomitant trauma (Follow regional medical control and triage protocols)*
- *Patients requiring extensive social, emotional or long-term rehabilitation*
- *Pediatric burns without qualified personnel or equipment*

In New Jersey, consult with The Burn Center directly at (973) 322-5920, or the NJ DOH at (609) 984-1863

Critical Incident Stress Debriefing (CISD)

It must be remembered that the use of a CISD Team in situations such as this is not a sign of weakness on the part of emergency personnel. Failure to deal completely with the emotional stress of such a traumatic occurrence can negatively affect both the professional and personal lives of those involved.

The notification and use of CISD teams is recommended whenever CISD "trigger events" are found to be present. Such significant events may include:

- *line of duty death of a co-worker*
- *mass casualty incidents*
- *death of a child*
- *death occurring after prolonged rescue efforts*

- *when a victim reminds an emergency worker of a loved one*
- *during highly dangerous or highly visible events*
- *when the emergency worker influences death or injury*
- *co-worker suicides*
- *any other unspecified highly traumatic event*

Currently, there are many CISD teams throughout the state, most of which are made up of other public safety individuals. These teams will respond on a 24-hour basis whenever requested. Emergency contact numbers for activation of a CISD team are as follows:

The Statewide CISD Network – (609) 394-3600
The NJ Fire & EMS Lifeline – (866) 653-3367

CONCLUSION

This incident resulted in the death of a promising young firefighter who by all accounts was a very dedicated individual. In addition to his service with the EFFD, FF Apuzzio, a student at Rutgers University also served on the Rutgers Emergency Services Unit where he was an EMT, as well as with the Union Twp. First Aid Squad in his hometown of Union.

This incident seemed to be routine in nature - that of a fire in a small single family dwelling with a victim that was easily reachable a short distance in from the front door. It is a situation that is faced by firefighters on a regular basis. This particular incident turned into a tragedy where two lives were lost mainly due to conditions that were nearly impossible to know due to the concealment of burned-through floor joists under a double layer of tongue and grove flooring that gave firefighters a false sense of safety.

During every emergency incident, there are things that could have been done differently. Some of these have been noted in this report and were developed with the benefit of time, which is not available during the incident. However, it is not readily apparent that these items, had they not been present, would have changed the outcome of this incident.

It is a fact that sometimes there are circumstances beyond the control of firefighters and the officers that command them that occasionally result in tragedies. It is for this reason that fire departments must continually strive to work to correct deficiencies that can be identified and remedied in order to provide a working environment that is absolutely as safe as it can be.

REFERENCES

Investigation Report – Somerset County Prosecutor's Office.

Emergency Radio Communications: Provided by the Somerset County Communications Center.

N.J.A.C. 5:75 – Fire Department Incident Management System. NJ adoption of NFPA 1561 – "Standard on Fire Department Incident Management System": 1995 edition.

NFPA Standard 1500 – "Fire Department Occupational Safety and Health Program": 1997 edition.

"NJ State Fire Prevention Code" – NJ Department of Community Affairs / Division of Fire Safety: 1996 edition.

Essentials of Fire Fighting - Fourth Edition. International Fire Service Training Association (IFSTA). Oklahoma State University, 1998.

Firefighter's Handbook. Delmar / Thompson Learning, 2000.

Fundamentals of Fire Fighter Skills. NFPA and International Association of Fire Chiefs (IAFF). Jones and Bartlett Publishers, 2004.

Fire Officer's Handbook of Tactics. John Norman. Fire Engineering: PennWell Publishing, 1991.

Principles of Fire Protection. Arthur Cote and Percy Bugbee. NFPA, 1995