

# Fire Investigation Summary

## Residential Fire

**Keokuk, Iowa  
December 22, 1999**



**A fire in a multiple family dwelling resulted in the deaths of three fire fighters and three children.**

**The fire began on the first floor and spread rapidly, sending smoke and hot gases to the second floor trapping an adult and four children. The adult and one child were able to escape through a second floor window.**

**While in the process of rescuing the children still trapped, three fire fighters were caught in the rapid build-up of heat and flame and perished.**



**National Fire Protection Association  
Fire Investigations Department**

At approximately 8:24 a.m. on Wednesday, December 22, 1999, a fire was reported in a multifamily dwelling in Keokuk, Iowa. Several neighbors phoned the Keokuk 911 center to report smoke coming from a residence, and that a woman was outside screaming that there were children trapped inside.

At the time the fire was reported, the on-duty force from the Keokuk Fire Department (an assistant chief, a lieutenant, and three fire fighters) was completing operations at a motor vehicle accident at a major intersection, two miles northwest of the fire scene. The dispatcher notified the units of the fire and the report of people trapped. Both units at the accident (Rescue 3 and Aerial 2) responded from the scene of the motor vehicle accident. During the response, additional calls were made to the 911 Center reporting heavy smoke coming from the house.

One member of the on-duty force of five fire fighters was committed in assisting the EMS crew on the ambulance and was en route to the Keokuk hospital at the time of the report of the house fire.

The chief of the department became aware of the incident as he entered his office at the fire station. The chief responded from the fire station and went to the hospital to pick up the fire fighter that was with the ambulance crew.

Upon arrival at 8:28 a.m., the units found heavy smoke showing from a two-story multifamily dwelling on the northeast corner of a four-way intersection. A water supply was established from a hydrant one-block southwest of the scene. Rescue 3, a 1500-gpm engine, laid a 5 in. diameter supply line from the hydrant while the lieutenant stayed at the hydrant to connect

the line and activate the hydrant. Aerial 2, with a 50-ft ladder and a 2000-gpm pump, continued to the scene.

The assistant chief requested six fire fighters be called back to duty as he arrived at the house in Aerial 2. As the two truck operators set up the apparatus, the assistant chief reportedly spoke to the female resident of the burning apartment. She reported that three of her children were still inside the apartment and that she tried but could not get them out. (She was able to exit the house via a second-floor window with her 4-year-old son, with the assistance of neighbors.) The assistant chief completed donning his protective clothing, including SCBA and entered the right side apartment door.

The chief arrived not long after the assistant chief entered the building. The chief ordered the two apparatus operators into the building to assist the assistant chief with the search for the children. Shortly thereafter, a fire fighter passed a 22-month-old male out the front door of the apartment to a police officer, who began CPR. The officer with the infant was then taken to a police car and transported to the hospital, six blocks west of the scene. A second child, an unresponsive 22-month-old female, was then passed out the door to the fire chief. With no EMS units yet on the scene, the chief chose to take the infant to the hospital in another police car, with a police captain driving. The fire chief conducted CPR on the infant during the one-minute ride to the hospital emergency room. He quickly handed the infant over to the emergency room staff and returned to the fire scene.

In the meantime, the fire fighter that arrived with the fire chief stretched a 1-1/2 inch hoseline to the front door of the fire apartment and returned to don

her SCBA. When the hoseline was charged, she noticed that the hoseline had burned through while at the entrance to the apartment. The fire fighter reported that the first level of the apartment was engulfed in flames visible from her vantage point at Aerial 2.

The location and condition of the fire fighters and the remaining child in the burning apartment was not known. The burned length of hose was removed, and the nozzle reconnected to the line as it was charged again. The fire fighter played a hose stream into the burning apartment. She was only able to advance 6-8 ft into the apartment before being driven back by the intense heat.

The first two of the “call-back” fire fighters arrived in Engine 6 (reserve unit). They were teamed with the lieutenant that was at the hydrant and had now walked the one block to the scene. The three were ordered to search the adjoining apartment for a resident that supposedly was still inside. The search was completed with nothing found. (The occupant was at a local restaurant.)

Efforts continued to contact the three fire fighters that were in the fire apartment. As additional call-back fire fighters arrived in Aerial 1 (100 ft aerial unit with a 1500 gpm pump), they were ordered to begin to search for the missing fire fighters in the original fire apartment. As the fire was knocked back and a search could begin, fire fighters quickly found one fire fighter in the first floor room to the right of the main entrance corridor. He had perished.

The assistant chief’s body was then found at the top of the stairs, not far from the body of the remaining child, a seven-year-old girl. The third fire fighter was found in the master bedroom to the right of the top of the stairs. All had perished.

The remaining fire was extinguished at approximately 1:30 p.m. Overhaul was conducted until 3:30 p.m. and at that point units were placed back in service.

On the basis of the fire investigation and analysis, the NFPA has determined that the following significant factors may have contributed to the deaths of the three fire fighters:

- Lack of a proper building/incident size-up (Risk vs. Benefit Analysis)
- Lack of an established Incident Management System
- Lack of an Accountability System
- Insufficient resources (such as personnel and equipment ) to mount interior fire suppression and rescue activities
- Absence of an established Rapid Intervention Crew (RIC) and a lack of a standard operating procedure requiring a RIC.

On the basis of the fire investigation and analysis, the NFPA has determined that the following significant factor may have contributed to the deaths of the three children:

- Lack of functioning smoke detectors within the apartment to provide early warning of a fire.

**Written by Robert F. Duval – Senior Fire Investigator - NFPA**

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