

HIGH-RISE BUILDING FIRE
PHILADELPHIA, PENNSYLVANIA
FEBRUARY 23, 1991

SUMMARY

On Saturday, February 23, 1991, an early evening fire occurred at a 38-story high-rise building in downtown Philadelphia resulting in the death of 3 fire fighters, fire extension to 9 floors, and severe structural damage to the building. In addition, 24 fire fighters and 1 civilian were injured in this mostly unoccupied office building. The fire also resulted in economic chaos to numerous business enterprises located within the building, and also to properties adjacent to the fire building where owners could not return to their properties for long periods of time.

The fire department received the initial alarm from a person located outside the building just before 8:30 p.m. Upon arrival at One Meridian Plaza, the fire fighters observed heavy smoke at the mid-height of the building. Fire fighters soon observed flames extending from one window and exposing the floor above. A thick, dark column of smoke was seen extending up the building's facade from this point toward the roof, and smoke was also beginning to vent from several additional points along the north side of the floor of fire origin. The fire would eventually result in 12 alarms involving hundreds of fire suppression personnel. During the 18 1/2-hour effort to control the blaze, interior fire suppression activities were hampered by the loss of electrical power (including emergency power) and inadequate fire attack hose stream pressure. As a result, the fire spread from the floor of origin, the twenty-second floor, to the twenty-ninth floor by various spread mechanisms. Vertical fire spread was eventually stopped by the thirtieth floor automatic sprinkler system supplied by fire department pumpers through the siamese connection.

NFPA's analysis of the major factors contributing to the loss of life of the fire fighters and severity of fire includes:

- The lack of automatic fire sprinklers on the floor of fire origin;
- The lack of an automatic early detection system;
- Inadequate pressures for fire attack hose lines due to the improper settings of the standpipe pressure regulating valves;
- The unimpeded growth and spread of the fire on the twenty-second floor;

- The early loss of the main electrical service and the emergency power to the building, including the loss of elevator service due to a breach in the electric room enclosure on the floor of origin;
- The improper storage and handling of linseed soaked rags and other associated combustibles; and

Inhibiting the spread of fire is:

- The effectiveness of automatic sprinklers on the thirtieth floor, supplied by fire department pumpers, in stopping the vertical fire spread.



This Summary may be reproduced in whole or in part for fire safety educational purposes as long as the meaning of the summary is not altered, credit is given to NFPA and the copyright of the NFPA is protected. This may not be used for advertising or commercial purposes without the express written consent of the NFPA.

© 2001 NFPA, Quincy, MA