

Fire Investigation Summary

Quincy, MA

**Merchandising Bulk Retail Store
May 23, 1995**

**At the time of the
fire the building
was occupied by
approximately 60
employees and
100 customers.**



**National Fire
Protection Association**

At 8:23 p.m. on Tuesday, May 23, 1995, a four-alarm fire occurred in a bulk merchandising store in Quincy, MA. At the time of the fire the building was occupied by approximately 60 employees and 100 customers.

The single story building was of noncombustible construction with an area of 122,395 square feet. The display merchandise and bulk storage was on a metal double rack system throughout the store. The building was equipped with a fire alarm and sprinkler system.

The fire started in the lower storage rack of an area that stored pool chemicals. An investigation conducted by the Quincy Fire Department and the Massachusetts State Fire Marshal's Office determined the fire was accidental in nature probably caused by a chemical reaction involving the pool chemicals and leaking motor oil. The motor oil leaked from boxes containing lawn mowers stored in the vicinity of the pool chemicals. The lawn mowers were shipped in containers that included a small quantity of oil which had to be added prior to use.

Based on the NFPA's investigation and analysis of this fire, the following significant factors were considered as having contributed to the loss of property in this incident:

- Incompatible materials stored too close to oxidizers.
- Materials stored in excess of allowable storage heights and within 18 inches of the sprinklers.
- Inadequate sprinkler design for encapsulated materials.
- The lack of in-rack sprinklers.
- Rack shelving of solid materials and wooden slats spaced too close together.
- Storage in aisles, which reduced commodity clearance between adjacent racks.

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The National Fire Protection Association's Fire Investigations Department documents some of the most significant fires and incidents throughout the world. The objective of these investigations, and the subsequent reports that are prepared, is to determine what lessons can be learned from these incidents. This information is then made available to the fire safety community to be used in developing future codes and standards and to modify fire ground operations.

NFPA Fire Investigations Department

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