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ARTICLE 81 EXCERPTS HIGH-PILED STORAGE **UNIFORM FIRE CODE-1979 EDITION**

The following are excerpts of the requirements pertaining to sprinkler protection and smoke removal/roof venting contained in Article 81 of the 1979 edition of the Uniform Fire Code (UFC).

It should be noted that the provisions for high-piled storage contained in the 1979 edition of the UFC specifically required that a mechanical smoke removal system be provided in buildings containing high-piled storage and protected by a sprinkler system. In other words, roof vents/draft curtains were not permitted to be provided in buildings containing high-piled storage protected by a sprinkler system.

Section 81.101. This article shall apply to the storage of high-piled combustible stock. Factors such as: method and height of stock piling, combustibility of materials, fuel load and rate of heat release, areas and size of piles, aisles, automatic fire extinguishing systems, smoke removal systems, building construction and fire separations are considered in settings forth the provisions of this article.

Automatic Fire Extinguishing Systems

Section 81.105. (a) An approved automatic fire extinguishing system shall be required throughout the building when the contiguous area (minimum separation between storage areas is 60 feet) used for high-piled combustible storage exceeds 12,000 SF inclusive of aisles.

Exception:

Smoke Removal

Section 81.106. (a) Smoke removal capability shall be provided in buildings protected by an automatic extinguishing system and shall be designed to provide a minimum of six air changes per hour at 100 percent exhaust to the outside.

(b) The air handling fans shall be controlled to shut down in accordance with the automatic shutoff requirements of the Mechanical Code or by activation of the fire protection systems.

(c) The system shall be designed for manual activation and override of the automatic shutdown by separate control switches from the main power switches to the building lights and equipment.

(d) The control switches shall be located in an approved location and shall be clearly identified.

(e) The fan capacity shall be based upon an empty building.

(f) There shall be a minimum of two separate exhaust fans located in different locations of the same fire areas of the building.

Roof Vents, Venting Ratios and Draft Curtains

Section 81.107. (a) Roof vents and draft curtains shall be installed when the contiguous area (minimum separation between areas is 60 feet) used for high-piled stock exceeds 2500 square feet.

Exception: Areas protected by an approved fire-extinguishing system.

(b) The design and installation of roof vents and draft curtains shall be as specified in the Building Code except as herein provided.

(c) Vents shall be installed in the roof, except that perimeter venting in the exterior walls by the use of automatic opening windows will be permitted to vent roof areas within 75 feet of an exterior wall. . . .Venting shall be provided in accordance with the following table:

Hazard Classification	Vent Area to Floor Area Ratio	Maximum Spacing Between Vent Centers
Class I, II and III	1:100	120 feet
Class IV	1:50	100 feet
Special Hazard Commodities	1:30	75 feet

(d) The minimum dimension of any roof vent shall be not less than 4 feet.

(e) Vents shall consist of automatic roof vents or automatic opening windows equipped with a fusible designed to release at 165°F, or roof monitors with a minimum opening of 24 inches or roof openings covered with approved plastics that will melt when heated and drop out at 165°F.

(f) Draft curtains shall be provided to aid the operation of roof vents. Draft curtains shall comply with the requirements of the Building Code except as herein provided.

(g) Draft curtains shall be at least 6 feet in depth and shall be of approved materials. For Class I, II and III commodities, draft curtains shall divide the under roof area into sections not to exceed 10,000 square feet. For Class IV and Special Hazard Commodities, draft curtains shall divide the under roof area into sections not to exceed 6,000 square feet.

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