**Section 653.803 Cross-Connection Control Devices**

a) A fixed proper air gap shall be used whenever technically possible.

b) Atmospheric Vacuum Breakers may be installed subject to the following conditions:

1) An atmospheric vacuum breaker shall not be installed where back pressure may occur.

2) An atmospheric vacuum breaker shall be installed at the highest point in the waterline and after the last control valve before the point of discharge and a minimum of six inches above the flood level rim of the receptacle.

3) An atmospheric vacuum breaker shall not be used for installations where the substance in the container receiving water is lethal or toxic. Examples of acceptable installations include:

A) surface wash piping for a gravity filter;

B) solution tanks of gravimetric dry chemical feeders;

C) outlets with hose attachments; and

D) receptacles with a low level inlet where the substance contained is non-toxic such as food or beverages.

c) Reduced Pressure Principle Backflow Preventers may be installed subject to the following conditions:

1) Installation

A) Units shall be accessible for maintenance and testing.

B) Minimum clearances recommended by the manufacturer shall be used.

C) Units shall be protected against flooding and freezing.

D) Relief ports shall not be plugged. A drain which will remain free flowing under all conditions shall be provided.

E) A collection system with an air gap under the relief port drain shall be installed with ceiling level units.

F) No reduction shall be made in the size of the relief port drain.

2) Bypasses - A second backflow preventer shall be installed parallel to the first if there is only one service line and the water service cannot be interrupted. Bypass lines without reduced pressure principle backflow preventers shall not be installed.

3) Reduced pressure principle backflow preventers shall be used for installations where a fixed proper air gap is not possible. Examples of such installations include:

A) the water line used to provide make up water for chemical feeders in a water treatment plant;

B) receptacles with a low level inlet where the contents are non-toxic such as food or beverages; and

C) receptacles or vessels which can subject the water supply line to back pressure.

4) Water service lines which connect a community water supply to industrial or commercial establishments shall include either a reduced pressure principle backflow preventer or a fixed proper air gap with repumping if those establishments constitute a hazard to the water supply due to the nature of chemicals or other material handled within the facility.

(Source: Amended at 9 Ill. Reg. 17367, effective October 23, 1985)