

by Air Filters, Inc. Richmond, Virginia

Attachment D

Filter Efficiency Based Upon Application

Local authorities have informed you that they wish to inspect your HVAC systems. Their visit is based upon a complaint by one or more of the building's occupants with regard to indoor air quality. What is your responsibility as a member of the engineering staff?

Legal circles and courts have held that the engineering profession has guidelines and standards that set a level of *standard care*. One of those standards of care refers to applying the proper filtration based upon the building's application. The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) denotes recommended filtration efficiency levels for standard buildings in their *HVAC Systems & Equipment* manual, published every four years. The most recent volume was published in 1992.

Page 25.10 lists "Typical Filter Applications Classified by Filter Efficiency and Type". This chart synthesizes some

considered. One factor includes additional heat gain, hence more air changes. Kitchens also use major levels of exhaust, hence voluminous amounts of make-up air. In effect air quality for kitchens is well spoken for.

Make-up air, meeting proper EPA cleanliness levels, brought into a kitchen, has the same effect as supplying clean filtered air. In short, when designing for air quality in a space, considerations are made for filtration, outside air amounts, ventilation effectiveness, and the planned purpose or use of the space.

In many cases engineers will apply filtration one level above that recommended in current standards to assure that they are matching or exceeding any updates. If problems do develop at a later date the engineers can document that they followed guidelines published by recognized authorities in effect at the time of construction. When considering an up-

Present General Design Criteria As Recommended by ASHRAE

Category	Filter Efficiency
Cafeteria & Restaurants	35% or better
Bar & Night Clubs	35% Plus Charcoal & Manual Air Purge
Kitchen	10-15% or Better