

THE FACILITY MANAGER'S GUIDE TO

# SICK BUILDINGS & INDOOR AIR QUALITY

### **SICK BUILDINGS**

DEFINITION: A building in which the environment puts the occupants at risk for upper respiratory infections



1 OUT OF 4

buildings in the US can be classified as **SICK** 

#### 64 MILLION WORKERS

frequently experienced two or more symptoms associated with **SICK BUILDING SYNDROME** (SBS) at work including:

Nose irritation
 Eye irritation
 Headaches



Indoor air pollution ranks as one of the TOP FIVE environmental risks to public health since 1990



## INDOOR AIR QUALITY (IAQ)

DEFINITION: The temperature, humidity, ventilation and chemical or biological contaminants of the air inside a building



2 OUT OF 3 indoor air quality problems involve INEFFICIENT HVAC AND AIR DUCT SYSTEMS



A buildup of JUST .042 INCHES of dirt on a heating or cooling coil can result in a decrease in efficiency of 21 percent

1 OUT OF 6
people who suffer from allergies
do so because of the direct
relationship to fungi and bacteria
in AIR DUCT SYSTEMS



### THE COST OF SICK BUILDINGS

IAQ problems cost the **US economy** as much as \$168 BILLION PER YEAR

US adults miss about 14 million workdays per year as a result of ASTHMA, an issue commonly triggered by poor IAQ

\$60 BILLION= Estimated loss in productivity due to poor indoor air quality

The efficiency of a cooling system with dirty coils can be reduced by AS MUCH AS 30 PERCENT

Indoor air pollution is one of our biggest environmental health threats... bigger than toxic waste sites and the destruction of the ozone layer.

—ENVIRONMENTAL PROTECTION AGENCY

### THE BENEFITS OF IMPROVING IAQ

- Reducing sick building symptoms through better indoor air quality and PROPERLY MAINTAINED HVAC SYSTEMS can lead to \$10-\$30 billion in productivity gains
- 1 PERCENT IMPROVED PRODUCTIVITY would be equivalent to the whole **ENERGY COST** of a building
- 78.56 percent the AVERAGE RETURN ON INVESTMENT of an IAQ improvement program
- A 100,000 square foot building with 400 TONS OF AC can save \$22,500 PER YEAR with a clean HVAC system
- CLEAN HVAC SYSTEMS reduce energy costs by over 30 PERCENT



