



THE 411 ON MOLD

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THE 411 ON MOLD: PART 2

- Acceptable Air Quality
- Prevention Methods
- IAQ Management Plan

IN THE CIRCUIT COURT FOR SULLIVAN COUNTY
AT KINGSPORT, TENNESSEE

MICHAEL KEVIN UPCHURCH Plaintiff,		Case No. C42530 (m) JURY DEMANDED FILED 2-19-19 3:00 PM Bobby L. Russell CIRCUIT COURT CLERK
v.		
SULLIVAN COUNTY DEPARTMENT OF EDUCATION Defendant.		

**COMPLAINT FOR PUBLIC POLICY: INTENTIONAL FAILURE TO REMEDIATE
CONTAMINATION OF PROPERTY, PUBLIC POLICY: INTENTIONAL
CONCEALMENT OF BIO-HAZARDOUS EXPOSURE, DEFAMATION: SLANDER,
FRAUD: INTENTIONAL MISREPRESENTATION, INTENTIONAL INFLICTION OF
EMOTIONAL DISTRESS, AND CIVIL CONSPIRACY**

WHEREAS Plaintiff, Michael Kevin Upchurch, by and through his undersigned counsel,
for his cause of action against Defendant, Sullivan County Department of Education, would
show the court as follows:

intentional acts of the defendant;

**FORMER TEACHER SUING SCHOOL SYSTEM
AFTER HE SAYS HE GOT SICK DUE TO MOLD**

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“ACCEPTABLE” AIR QUALITY

WHAT DEFINES “ACCEPTABLE” AIR QUALITY?

Contributes to comfort, productivity and a sense of well-being.

- Limited odors, dust and contaminants
- Adequate air circulation to prevent stuffiness or drafts
- Temperature and humidity appropriate to season and activity of occupants
- Adequate light to illuminate work surfaces without excessive glare
- Noise levels do not interfere with work activities



CONTRIBUTORS TO IAQ COMPLAINTS

- Contaminant sources (indoor and outdoor)
- Occupant activities
- HVAC issues
- Contaminant pathways

DON'T OVERLOOK THE PEOPLE ASPECTS

- Symptoms are often non-specific
- Lack of control over the workplace environment
- Most people feel better at the end of the workday/workweek
- Claims are infrequent, but complaints impact on productivity
- Individual
 - Perceived issues may be unrelated to IAQ
 - Job stress
 - Lighting
 - Ergonomics



STAY FOCUSED ON THE ROOT CAUSES

- Greater than 60% of IAQ complaints are due to lack of fresh air
- Rule out most obvious sources of complaints first

*“When you hear hoofbeats,
think Horses, not Zebras”*



PREVENTION METHODS

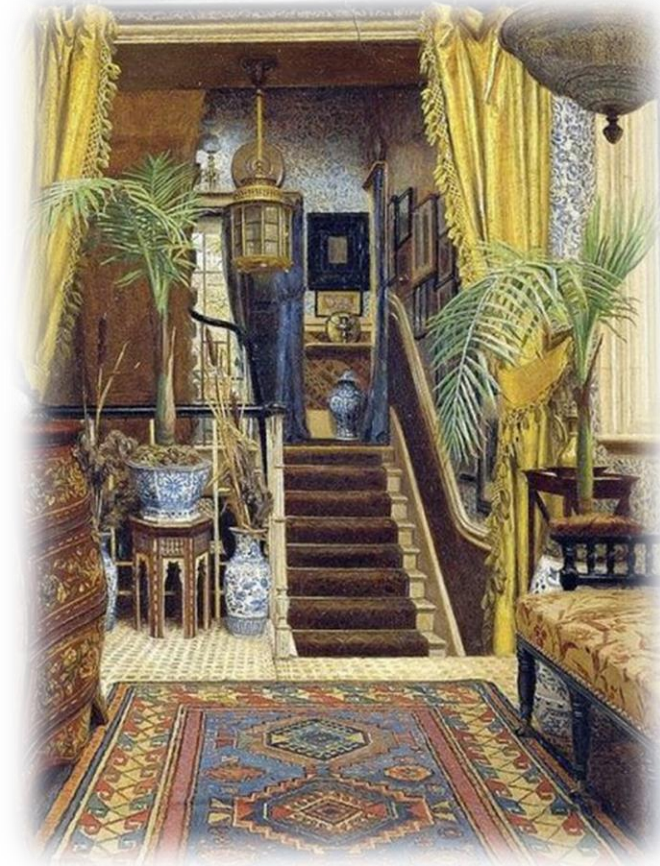
PREVENTING MOLD GROWTH

- Eliminate the 4 factors for mold growth
 1. Food sources
 2. Environmental conditions
 3. Water sources
 4. Time



I. FOOD SOURCES

- Eliminate unnecessary food sources
 - Fabric finishes
 - Bare wood/open grain wood furniture
 - Cork boards
 - Carpets/area rugs
 - Leather furniture
 - Fabric-bound books
 - Previously water impacted paper/books
 - Plants



2. ENVIRONMENTAL CONDITIONS

- High humidity (>70%) is a significant factor for mold growth
- Lack of air conditioning
- Unoccupied buildings
- Proper HVAC maintenance and operation



HVAC MAINTENANCE

- Dirty cooling coils and condensate drains
- Fungal growth in air handlers
- Blocked vents/intakes or “modifications”
- Missing or damaged pipe insulation
- Filter changes
- Duct inspections



HVAC OPERATION

- Understand how your systems are designed and operated to reduce humidity
- Prevent short-cycling
 - Isolate a percentage of small systems to force systems to cool longer
 - Increase chilled water temperatures
 - Heat building if necessary
- Plan for seasonal changes
- Monitor relative humidity
- Use commercial drying fans and dehumidifiers



3. ELIMINATE WATER SOURCES

- Identify sources of leaks and water intrusion
 - Ground water intrusion
 - Roof leaks
 - Ponding/poor drainage
 - Pipe condensate
- Eliminate unnecessary humidity sources
 - Carpet cleaning (wet extraction)
 - Open windows
 - HVAC air intakes



4. TIME

- Leaks or spills need to be eliminated, cleaned and dried immediately
- Typically a 48 to 72-hour window to prevent mold growth
- Leaks in hidden spaces (wall cavities, crawl spaces) can often go unnoticed



OTHER PREVENTION METHODS

- Regular building inspections
- Furniture and finishing purchases
- Seasonal planning
 - Cleaning events
 - Renovations
- Respond to events quickly
- Documentation



WHEN REMEDIATION IS NEEDED

- Small-scale cleanup can be performed by trained custodial staff
- Large-scale remediation by qualified contractor
 - Establish a remediation plan
 - Large-scale remediation by qualified contractor
- Follow established protocols
 - NYC Guidelines
 - Carolina Protocol





IAQ PROTOCOL

IAQ MANAGEMENT PLAN

- Establishes roles, responsibilities and activities
 - Visual inspections
 - Testing
 - IAQ logs
 - Investigation process
- Facility operational practices
- Emergency response
- Corrective actions
- Training and communication
- Documentation and recordkeeping





NEED MORE INFO?

NEED MORE INFORMATION?

- U.S. EPA Tools for Schools

<https://www.epa.gov/iaq-schools>

- NIOSH Dampness and Mold Assessment Tool: School Buildings

<https://www.cdc.gov/niosh/docs/2019-114/>

- NY City Guidelines on Assessment and Remediation of Fungi in Indoor Environments

<https://www1.nyc.gov/assets/doh/downloads/pdf/epi/epi-mold-guidelines.pdf>





THANK YOU!