

Building IAQ Air Monitoring: A Forward Thinking Approach

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Topics

1. The Traditional IAQ investigation
2. The Proactive IAQ Program
3. Moisture Management Program

THE TRADITIONAL IAQ INVESTIGATION

The Traditional IAQ Investigation

- Tenant/Occupant complains
- Property manager calls consultant to deal with one specific issue in one specific tenant space
- Scope of work developed, proposal written
- Investigation completed and report prepared
- Cost \approx \$1,000 - \$5,000 or more

THE PROACTIVE IAQ INVESTIGATION

What is Proactive?

- Proactive means ...
“acting in anticipation of future problems,
needs or changes”

What is Proactive IAQ testing?

- Regular testing (every 6 months or year) of IAQ Provides updated building performance data in advance of occupant complaints
- Includes visual assessments during testing of general building condition, parts of HVAC system, signs of water intrusion, etc.
- Seasonal variations can be taken into account

Reasons for implementing a Proactive IAQ Program

- Addresses regulatory requirements
- Addresses and hopefully minimizes tenant/occupant complaints
- Improves tenant/occupant morale
- Very useful in lease negotiations
- Risk management

Reasons for implementing a Proactive IAQ Program

- Has become part of wording in lease documents
- Can diagnose an IAQ issue before it escalates into the real concern
- Very cost effective \approx \$2,000 - \$4,000 for whole building

Reasons for implementing a Proactive IAQ Program – New Construction

- Establishes a benchmark
- Future issues can be compared to benchmark
- Is issue related to tenant improvements?
- Odors from offgassing products?
- Dust?

What parameters are tested?

- Carbon dioxide – to assess ventilation system performance
- Carbon monoxide – to determine potential infiltration of automobile exhaust or other combustion sources
- Temperature and relative humidity – comfort parameters

What parameters are tested?

- Respirable suspended particulate (RSP) – to assess filtration or potential source of indoor particulate
- Total volatile organic compounds (TVOC) – measurement of paints, solvents, chemicals
- Optional: Other known air contaminants of concern (e.g., ozone, formaldehyde, mold)

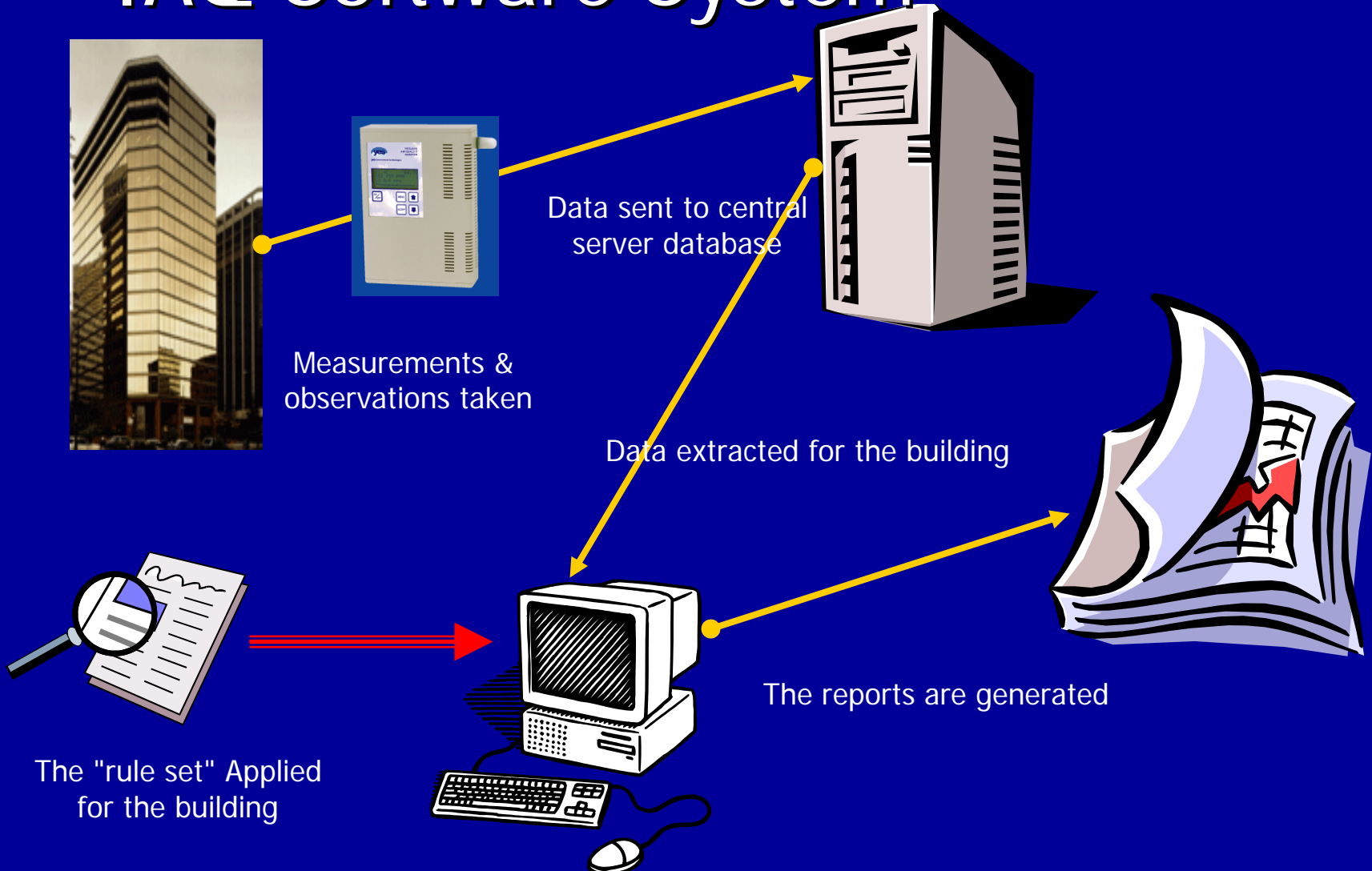
IAQ parameter test methods

- Instantaneous measurements in EVERY tenanted space of building – each tenant sees the testing being conducted
- One set of measurements in morning and one in afternoon
- PDA configured database to log results
- Report prepared comparing results to guidelines

New technologies

- www.iaqsoftware.com
- Data can be uploaded and report automatically generated
- Reports are customized...not just a table of numbers

IAQ Software System



The "rule set" Applied for the building

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Construction Solutions

A Web-based IAQ Management Program

- Proprietary IAQ Software System provides clients worldwide internet online IAQ management and reporting system
- Benchmarks the existing IAQ performance
- Establishes appropriate baselines for efficiently optimising IAQ and energy efficiency objectives

A Web-based IAQ Management Program (cont.)

- Archives a database of historical measurements and observations for comparison
- Provides cost benefit analysis and recommendations of options for improving IAQ and building efficiency
- Includes ongoing consultation and assistance for implementation of recommendations for improved IAQ

MOISTURE MANAGEMENT PROGRAM

What is Proactive Mold/Moisture Management?

- Inspections, procedures and policies to minimize the likelihood of moisture infiltration into a building
- Expeditious handling of a moisture incident ... get it dry quick!
- Proactively collecting airborne mold spore samples not recommended

Why should I implement a Mold/Moisture Management Program?

- RISK MANAGEMENT
 - Both health risk potential and risk of damage to building
- TENANT SATISFACTION
 - Happy tenants renew leases and keep paying rent

How to implement Mold/Moisture Management?

- Educate workers about mold, the causes, costs to a building, and remedies
- Schedule regular building/HVAC inspections – use checklists
- Look in susceptible areas
- Moisture meter???

How to implement mold/moisture management?

- Inspections, where to look
 - HVAC units, coils, drains, etc.
 - Washrooms
 - Janitor closets
 - Exterior walls – envelope?
 - Roof drains – leaves, other blockage
 - Flashing on roof
 - Water stained ceiling tiles



What to do in case of water intrusion?

- Get it dry quick!
- Correct water issue
- Move furniture from walls and/or off carpet
- Pull back baseboards
- Cut out bottom 2-4 feet of drywall
- Replace carpet?
- Use dehumidifiers and/or fans

In Conclusion

- Consider being proactive for IAQ instead of reactive
- Develop moisture management program
- Train building ops personnel on water issues

Thank you very much!

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