



## **SECTION 14–INDOOR AIR QUALITY** **(IAQ)**

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## 14.1 INDOOR AIR QUALITY CONCERNS

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### A. Objective

To maintain a healthy and comfortable indoor environment.

### B. Scope

The scope of this program is extended to the entire campus community. Employees should report Indoor Air Quality (IAQ) deficiencies and complaints to their supervisor, who should in turn report the matter to Facilities Management (x6350) for corrective measures.

### C. References

Illinois Indoor Air Quality Act 410 ILCS 87, Illinois Clean Indoor Air Act 410 ILCS 80, ASHRAE Standard 55-1992 and ASHRAE Standard 62-1999.

### D. IAQ Program

The most common origins of IAQ problems arise from a variety of sources inside and outside the buildings. Airborne chemicals, bacteria, fungi, pollen, dust, and vehicle exhaust can all contribute to the problem, as well as other factors such as temperature, humidity, lighting, noise, personal and work-related stress, and pre-existing health conditions. These factors, combinations of the factors and short term unidentified events combine to make identification of a source difficult and sometimes impossible.

A typical investigation of an IAQ complaint should with a call to the Facilities Management (x6350). Maintenance or Utilities can investigate and remedy straightforward issues such as temperature, malfunctioning fans, odors from dry floor drains, and transient odors from maintenance activities. If the problem is caused by a more complex situation, such as inadequate ventilation or excessive moisture, then the problem may require a more detailed investigation. The Office of Environmental Health & Safety can conduct this investigation. Sometimes the remedy involves an extensive project and may be delayed by the need for non-routine sources of funding.

Some actions building occupants can take to help maintain good IAQ are as follows:

- Report poor indoor environmental conditions (e.g. stuffy air, heat or cooling problems, annoying odors, etc.) to Facilities Management at ext. 6350.
- Report water intrusion into buildings as soon as possible to Facilities Management at ext. 6350. The longer building materials remain damp the more likely the potential for excessive microbial growth.
- Limit the use of products that produce odors or volatile solvents to specifically designed rooms, preferably with local exhaust ventilation. This also applies to equipment that generates excessive heat or produces odors.
- Minimize generation of dust or aerosols in the work area.
- Maintain good housekeeping in work areas and break areas. Throw away garbage and old food and clean up spills promptly.
- Do not bring in ozone producing devices on campus. Often vendors of ozone producing devices make statements that lead the public to believe that these devices are always safe and an effective in controlling indoor air pollution. In reality these devices have **not** been proven safe in occupied spaces. When inhaled, high concentrations of ozone can damage the lungs and lead to health problems such as throat irritation, coughing, chest pain, and shortness of breath.



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If you feel that you are experiencing health effects due to the IAQ report these to your supervisor. If symptoms persist proceed to the Health and Psychological Services for a health evaluation. It is recommended that employees experiencing repeated discomfort keep a log of when the discomforts occur. The log should include some of the following: date, time of day, discomfort, length of time of discomfort, any unusual odors experienced and outside conditions at the time. (*See Section 14.2 of the EH&S Manual*) The recording of events in a log might point to activities taken place inside or outside the building.





## 14.3 MOISTURE AND MOLD REMEDIATION

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### A. Objective

This procedure outlines methods to prevent mold growth in buildings that have been affected by water infiltration. The goal is to reduce or eliminate excess moisture in less than 48 hours as a means to prevent mold growth.

### B. Scope

The scope of this program is extended to the entire campus community. Employees should report moisture or water problems to their supervisor, who should in turn report the matter immediately to Facilities Management (x6350) for corrective measures.

### C. References

Currently there are no federal standards (OSHA, EPA, or NIOSH) for airborne concentrations of moisture or mold, however there are guidelines. These procedures are compiled from the National Institutes of Health procedures and EPA guidelines.

### D. Procedure (for Facilities Management)

1. Identify the source of the water infiltration or moisture and shut off or isolate the source.
2. Determine if the source of the water is clean or dirty. Clean water is potable, domestic water, de-ionized or distilled water. Dirty water contains chemicals or pollution such as sewage.
3. Determine the scope of the moisture damage. The Facilities Mgmt. Supervisor will determine if there is adequate personal and resources to conduct the clean up or if the outside remediation company (ACR) should be contacted. ACR will also be contacted for remediation of dirty water.
4. Conduct a general inventory of damaged areas, room numbers, type of room and general equipment in the room.
5. The following are general guidelines for specific clean water damaged building materials:
  - a. **Ceiling Tiles:** Discard and replace
  - b. **Carpet (rolled wall to wall):** Removal all furniture and cabinets sitting on wet carpet. Remove water with extraction vacuum and put out air movers (floor drying fans). Be aware that some buildings have asbestos tile under carpeting so always check with Environmental Health & Safety before pulling up rolled carpet.
  - c. **Carpet (squares or tiles):** Remove all furniture, however the water based glue that is used for carpet squares will usually dissolve and prevent the carpet from adhering to the floor and will need to be removed and fans should be put out to dry the concrete floor. The carpet squares can be replaced once the concrete is dry.
  - d. **Non-Carpeted Flooring (vinyl, ceramic or linoleum tile or concrete):** Vacuum or damp wipe with water and mild detergent, put out air movers and allow to dry.
  - e. **Baseboard/Cove Base:** Remove all baseboards on walls or built-in cabinets that came in contact with water. Try to pull down when removing baseboard to prevent further wall damage. Removed baseboard can be thrown away.
  - f. **Books and Papers:** All items that cannot be dried will be put aside for inventory and review by the items owner. Only the owner should discard of these items. It is recommended that non-valuable materials should be discarded. Digital photos should be taken of important documents and the originals should be discarded. For items



- with high monetary or sentimental value the restoration company (ACR) will be consulted.
- g. **Upholstered Furniture:** Remove water with an extraction vacuum and direct fans to the furniture.
  - h. **HVAC System:** If the water damage occurs in the summer and the HVAC is in cooling mode, lowering the indoor temperature will aid at removing moisture from the air. The Utilities division should be contacted to see if the air temperature can be lowered. In winter months when the HVAC is in heating mode, humidity levels are usually already low and additional moisture can only be removed by a dehumidifier.
6. The following is a list of equipment that maybe used:
- a. **Air movers (or floor drying fans):** Air movers are designed at a low center of gravity to force air along floors and wall surfaces.
  - b. **Extraction Vacuums:** Extraction vacuums remove the water from the floor or furniture and collect the water. They should not be used on drywall.
  - c. **Dehumidifiers:** Dehumidifiers are devices to remove water vapor from the air. They can lower humidity levels in affected areas to aid in drying.
7. The remediation contractor should be contacted if any of the following:
- a. There is not adequate personnel available for clean up.
  - b. If the water source is dirty (sewage or chemical contaminated).
  - c. If the clean up did not begin within 48 hours of the water infiltration and the infiltration damaged a large area.
  - d. There is visible mold growth on drywall that is larger than a 10 square foot area.
8. Report all water damage to Environmental Health & Safety (EH&S) immediately. EH&S can help evaluate the problem and if the damage warrants an insurance claim. EH&S can also help measure relative humidity levels and has a moisture meter to help measure drywall moisture levels. EH&S will also oversee any mold remediation done by ACR or other contractor. EH&S can also assist with issues of asbestos or other chemicals.