Indoor Air Quality

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SAINT LOUIS UNIVERSITY

Background

Indoor Air Quality (IAQ) refers to the quality of a building's interior environment in relation to the health and wellbeing of those who occupy space within it. Together, the Office of Environmental Health and Safety and Facilities Services strives to ensure that SLU maintains a healthy indoor air quality environment.

- Office of Environmental Health and Safety (OEHS) is responsible to ensure that people have a safe work environment free from exposure to health hazards.
- Facilities Services (FS) maintains and coordinates building operations such as air handler systems that supply a comfortable and healthy indoor environment.

Heating, ventilation, and air conditioning (HVAC) systems, air filters, and air ducts are routinely inspected through planned work orders which mitigate negative impacts on IAQ. Despite these efforts, workers may at times be concerned that they have symptoms or health conditions from exposures to contaminants in the buildings where they work. One reason for this concern is that their symptoms often get better when they are not in the building. Problems with indoor air quality can originate from a variety of sources. Some main culprits of IAQ problems are chemical pollutants, air contaminants from inside or outside, and improper building ventilation. Poor indoor air quality can cause nose and throat irritation, headaches, dizziness, sleepiness, or uncomfortable work environments.

Varying degrees of IAQ may affect different people in different ways. Some people may not be affected, while others can be strongly impacted. Personal allergies, asthma, or respiratory diseases can contribute to some individuals being more susceptible to contaminants than others. Saint Louis University aims to create a healthy environment for all building occupants.

IAQ in buildings is important to be aware of at all times of the year, but some seasons cause extra issues. It is important to be aware of the seasonal outdoor air qualities when thinking about indoor air quality. For example, in winter months the air is cold and dry. This can cause dry itchy skin or nose and throat irritation. In spring and fall, allergens from outside can impact individuals more depending on personal allergies. On days with a high pollen or allergy index, some individuals in the building may want less outside air flow. Pollen and allergy indices can be found by the weather channel here.

For more information about indoor air quality:

- Visit U.S. Consumer Product Safety Commision website

- Visit U.S. Environmental Protection Agency website

Possible IAQ Contaminants

Air contaminants from outside which may cause IAQ problems are:
- airborne mold/ fungi
- dust (especially from nearby construction)
- pollen

Air contaminants from inside which may cause IAQ problems are:
- mold/ fungi
- dust from carpets or air ducts
- cleaning agents such as sprays which bounce into the air
- microbiological growth in cooling system drip pans or humidifiers

Building ventilation:
- proper ventilation allows contaminants to move freely out of spaces
- no ventilation creates an opportunity for contaminants to increase or breed

Chemical pollutants which may cause IAQ problems are:
- radon
- carbon dioxide
- other laboratory chemicals

Procedure to Submit a Concern

Any issues with indoor air quality can be submitted via the FAMIS work order system or directed to the Office of Environmental Health & Safety.

For general, non-immediate problems:
- Fill out a service request through FAMIS
- Do NOT submit emergency requests through the FAMIS

How to submit a FAMIS Service Request:
- login to the system using your SLUnet ID and password
- identify the area that is causing this specific incident/problem
- select: A) WORK REQUEST FOR MAINTENANCE REPAIR & SERVICES
- select: Air Quality
- choose Air Quality again
- proceed to describe the incident in description of work
- type in the earliest start date (ex. the next day)
- type in the latest completion date (ex. latest date reasonable for you)

- type date/times the work can not be performed in that location that we should be informed about

Report a Safety Concern with Office of Environmental Health & Safety

- When an environmental health and safety concern is noticed, determine whether you are capable of resolving it either by correcting the issue yourself or by notifying the correct department (e.g., submitting a work order using the FAMIS system).
- If you are not able to resolve the concern, click the link and complete the form to report a safety concern.

For emergency situations that create unsafe conditions:

- Call Facilities Services at 314-977-2955
- Facilities Services can assist with unworkable indoor conditions such as dust or debris plumes, severe irritation from chemical cleaning agents, etc.
  OR
- Call Office of Environmental Health & Safety (OEHS) at 314-977-8608
- OEHS can assist with biological or chemical spills, gas smells, etc.
- OEHS website

For after-hour emergencies:

- Call the Department of Public Safety & Emergency Preparedness (DPSEP) at 977-3000
- DPSEP is available 24 hours a day, 7 days a week
- DPSEP website

Remediation Process

OEHS personnel perform IAQ inspections upon request. IAQ inspections include, but are not limited to the following:

- Visual inspection of occupied spaces and air-handling systems serving the space
- Evaluation of building ventilation rates to ensure that occupants are receiving an adequate quantity of outside air and dilution ventilation
- Evaluation of building temperature and relative humidity to ensure occupant comfort and to prevent microbial growth and amplification
- Quantification of possible chemical contaminants that have been identified during the visual inspection

Upon completion of the IAQ inspection, OEHS will work with Facilities Services and all other parties involved to resolve any IAQ issues identified during the course of the inspection.

Additional IAQ services that OEHS and Facilities Services may provide include:

- Responding to occupant reports of chemical odors to assess employee exposure and recommend remedial activities.
- Providing consultation for the selection and installation of new building materials and furnishings that will have a minimal impact on IAQ.
- Working with departments to minimize the impact on IAQ during renovations and demolitions of occupied buildings.
- Providing recommendations for air-cleaning equipment when deemed necessary.

Tips for better IAQ

- **Keep building materials dry:** Many building materials can support mold growth when they are wet for extended periods.
- **Report water leaks**: Occupants are in the best position to recognize new water leaks and notify Facilities Services to take corrective action. Facilities Management can replace damaged ceiling tiles or drywall that has been wet for too long or dry large water spills efficiently by extracting water from the carpet and using fans to speed dry time.
- **Keep windows closed**: Outdoor air carries pollen, mold spores, and humidity, any of which may cause problems indoors. Air that is brought in via the building HVAC system is filtered and conditioned, removing allergens and excess moisture. Leaving windows open may cause allergic-type symptoms in sensitive individuals, and may lead to condensation (and later mold growth) when humid outdoor air comes in contact with cool indoor surfaces.
- **Do not block air vents**: The building's HVAC system was designed to provide and circulate air from each part of the building. Blocking the vents can compromise this design. If needed, Facilities Management can place a deflector over the grille to redirect the air so that it doesn't blow directly on building occupants.

- **Remove visible mold**: If you notice mold growing on building materials, submit a FAMIS worker order to have the mold removed.

Smell an odor? What should you do?

- **Natural gas**: call Facilities Services immediately to check for leaks.
- **Isolated odors:** If the odor is present only in a single room, it is most likely caused by something in that room, such as rotten food or something in the trash. Look around in the room to see if you can determine the cause. Dry sink traps are notorious for producing sulfur-like odors. If you have a sink or floor drain that is not frequently used, pour some water into it to fill up the trap and block odors from the sewer line.
    - If the odor is a localized odor that seems sulfur-like but you cannot find a dry trap, submit a FAMIS work order for plumbing concerns and ask to have a plumber check for a hidden drain or uncapped pipe.
- **Widespread odors**: Look around your work area for any out-of-the-ordinary activities, such as painting, construction, custodial or grounds activities.
    - If you are not able to determine the cause of the odor yourself, contact Facilities Services through the FAMIS work order system. They may know of activities that could be causing the odor, or they can check your HVAC system to see if the odor source may be near the air intake.
- **Diesel odors:** These are usually transient, but may be near air intakes. This allows odors to come inside through the HVAC system.
    - In this case, ask the drivers/operators to move away from the air intakes or ask them to turn off their engine.
    - SLU abides by the “No Idling” ordinance by the city of St. Louis. Signs are posted by many loading docks to prevent this occurrence.
- **Tobacco & smoke**: Saint Louis University Medical Center is a tobacco-free environments and the Frost campus workplaces are smoke-free environments. Smoking related odors are not considered safety issues. Please refer to the administrative policies that apply to your entity for more information.
- **Recurring odors:** If there is no apparent source, keep a record of the days and times that you notice the odor. This may help you identify a pattern and thereby recognize the cause of the odor.