

## University of Louisville

### **Guidelines for Reporting & Responding to Indoor Air Quality Concerns in Offices, Classrooms, Shops, Labs & Athletic Facilities**

#### **Purpose:**

To provide guidelines for managing responses to indoor air quality concerns from occupants of offices, classrooms, shops, labs and athletic facilities.

#### **Scope:**

These guidelines apply to all University of Louisville offices, classrooms, shops, labs and athletic facilities.

#### **Introduction:**

University of Louisville is committed to providing a work environment that is free of recognized hazards and to investigation complaints that may be related to poor indoor air quality (IAQ). Though specific regulations have not been developed for IAQ in the work place, the Department of Environmental, Health and Safety Department (DEHS) considers recommendations from the American Conference of Governmental Industrial Hygienists (ACGIH), American Industrial Hygiene Association (AIHA), and the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE).

Indoor air quality (IAQ) involves the contents of indoor air that could affect the health and comfort of building occupants. IAQ is influenced by a variety of factors, the most common being:

- Temperature and humidity;
- Insufficient outside air being introduced into the Heating, Ventilation, and Air Conditioning (HVAC) system;
- Insufficient circulation of air;
- Odors from outside sources being introduced into the system or inside odors being recirculated;
- Water Intrusion not remediated within 24-48 hours; and
- Insufficient cleaning.

Failure to respond to indoor air quality concerns in a timely and appropriate manner can have numerous detrimental consequences such as:

- Increasing long and short term health problems such as cough, eye irritation, headache, asthma attacks and allergic reactions. In rare instances, allergic reactions may lead to life-threatening conditions such as severe asthma attacks, Legionnaire's disease or carbon monoxide poisoning;
- Promoting the spread of airborne infectious diseases;
- Producing an unfavorable work and learning environment;
- Reducing the productivity of staff and students due to discomfort, sickness, or absenteeism;
- Accelerating the deterioration and thus reducing the efficiency of the Heating, Ventilation and Air Conditioning (HVAC) equipment;

- Increasing the risk that areas will have to be closed and the occupants temporarily relocated;
- Creating potential liability problems.

## **Indoor Air Quality Investigations:**

IAQ investigation consists of the following:

1. **For temperature, odor or smell complaints, suspected water leaks or visible mold:**
  - a. The occupant reports their concern to Physical Plant through the work order system.
  - b. Physical Plant will investigate and determine the source and make any necessary repairs.
  - c. Physical Plant will defer the complaint to the Department of Environmental Health and Safety (DEHS) if they cannot remedy the problem.
  - d. DEHS will interview building occupants and conduct a building survey
  - e. The occupant will complete a request for IAQ investigation and an Occupant Survey and submit the request form to [dehsih@Louisville.edu](mailto:dehsih@Louisville.edu) .
  - f. The occupant may be requested to complete an IAQ log to track odors, or conditions to better assist in the investigation.
  
2. **For IAQ complaints with no visible odors, leaks or mold:**
  - a. The occupant will complete a request for IAQ investigation and an Occupant Survey and submit the request form to [dehsih@Louisville.edu](mailto:dehsih@Louisville.edu) .
  - b. DEHS will interview building occupants and conduct a building survey
  - c. The occupant may be requested to complete an IAQ log to track odors, or conditions to better assist in the investigation.
  - d. DEHS may contact Physical Plant when necessary if issues with the HVAC or other building systems are identified during the investigation.

These steps work to assist in determining an appropriate remediation strategy.

Investigation and remediation of IAQ concerns is a joint effort between Physical Plant, DEHS, and the occupant(s) reporting the problem. Most IAQ problems or complaints can be remedied quickly. However, complex situations (e.g., large areas of complaints, mechanical malfunctions, intermittent odors, etc.), may take more time to reach a resolution. In each case, Physical Plant and DEHS should make it a point to keep building residents informed of progress in addressing the situation. For water intrusion or leaks that have impacted building materials which are not able to be cleaned up within 48 hours or reported to Physical Plant past the 48 hour window for cleanup or the time of leak is unknown to Physical Plant, DEHS must be notified immediately.

## **Responsibilities of Physical Plant:**

Physical Plant is responsible for maintaining and operating each UofL building in the condition which they are designed to operate that provides for adequate indoor air quality and occupant comfort within the operating building parameters, keeping in mind that each building has a different system and

parameters. This includes inspection, maintenance and repair of HVAC and structural components associated with the interior and exterior of the buildings. Physical Plant will take reasonable steps to see that HVAC (Heating, Ventilation, Air Conditioning) systems are operating properly. Physical Plant checks and performs filter changes in HVAC units as needed. Physical Plant will contact DEHS when IAQ concerns become more complex and involve further investigation beyond their work scope.

### **Responsibilities of DEHS:**

DEHS is responsible for working with Physical Plant and the occupant(s) as needed to perform interviews and indoor air quality investigations to develop a plan to assist in locating and remediating the source(s) of the occupants' IAQ concerns.

### **How to Conduct an Initial Survey of the Area:**

If a UofL faculty, student or staff member reports indoor air quality concerns, an important step to take is to identify potential sources of concern by conducting a basic survey.

1. Survey the area of concern for the following:
  - a. Chemicals stored in open containers (i.e., cleaners, paints, etc.);
  - b. Visible mold or mildew growth;
  - c. Odors caused by outside activities (e.g., cigarette smoke, construction activities, engine exhausts, garbage, etc.); or
  - d. Anything that likely could be the cause of the resident's IAQ concern.
2. Ask how long that the IAQ problem has been occurring.
3. Ask whether the IAQ problem is continuous or intermittent.
4. If the source of the IAQ problem cannot be readily identified, then it is helpful to ask the room occupant to keep a log about the nature of the problem and the surrounding conditions, describing any pattern or other aspects that will help uncover the cause of the IAQ problem. The log will be used to focus on the most likely causes and times of the problem and could expedite a solution.

### **How to Minimize IAQ Problems:**

IAQ problems can be minimized in UofL buildings by occupants doing the following:

- Do not block or shut vents or building returns.
- Do not block thermostats with furniture or equipment.
- Observe the University's NO SMOKING Policy, which prohibits smoking inside of buildings and only in designated university areas.
- Dispose of food waste and containers in receptacles that are emptied daily.
- Do not over water plants and do not allow mold growth to occur in the dirt.
- Clean up water or other liquid or food-based spills IMMEDIATELY.
- Report water intrusion and sewage problems IMMEDIATELY to Physical Plant.
- Avoid concentrating electronic office equipment within small, unventilated areas.
- Do not burn candles or have other scent-producing materials.

## **EVENTS WARRANTING IMMEDIATE REPORTING:**

### **1. Water intrusion events - IMMEDIATELY report leaks or other water intrusion to Physical Plant.**

Include, to the extent known, the following information:

- a. source and approximate quantity of water,
- b. affected areas,
- c. water-damaged materials, and
- d. whether or not the source has been controlled.

**-Note that even clean water left for more than 24-48 hours can lead to mold and mildew growth.**

### **2. Sewage backflows - IMMEDIATELY report sewage backflows to Physical Plant.**

Events involving sewage backflows are very serious. Report the problem IMMEDIATELY to Physical Plant and Custodial Services and do not attempt to clean or remove affected materials. Physical Plant and Custodial Services will manage the response.

**DEHS is notified by Physical Plant of water intrusion incidents that have occurred and which have impacted building materials and provides information that the situation has been repaired and wet materials dried or removed.**

## **Who to Contact:**

-Emergency for natural gas leak or sewer odor should be reported IMMEDIATELY to **Physical Plant Work Control – Belknap (502) 852-6241 & HSC (502) 852-5695** or to Public Safety at (502) 852-6111 after hours or on weekends.

-Non-emergency IAQ complaints can be reported to Physical Plant at (502) 852-6241 for Belknap and (502) 852-5695 for Health Sciences Campus or Shelby Campus.

-If Physical Plant is unable to identify and resolve the problem, the department should contact DEHS at (502) 852-6670. All affected building occupants should complete an IAQ request and Questionnaire. Once the questionnaire is completed, then email or fax it to the DEHS representative indicated on the form.

## **INDOOR AIR QUALITY CONTACT PHONE DIRECTORY:**

**Physical Plant Work Control – Belknap (502) 852-6241 & HSC (502) 852-5695**

**Dept. of Environmental Health & Safety – (502) 852-6670**

**University Police – Call 911 for life-threatening emergencies.**

**University Police can be reached at (502) 852-6111**