



INDOOR AIR QUALITY (IAQ) COMPLAINTS STANDARD OPERATING PROCEDURE (SOP)

Indoor air quality (IAQ) problems can result from many causes. While mold growth has received considerable attention, it is not the only cause of indoor air quality complaints. This SOP discusses common causes of IAQ complaints, the steps taken in response, and tips for avoiding IAQ problems.

Indoor air quality problems can come from a variety of sources either inside or outside the building. The agent responsible for the complaint may be transient, intermittent or chronic and it may be chemical, biological or physical in nature.

Individual response to an airborne substance can vary greatly as can an individual's perception of comfort. Other factors can also influence an individual's perception of comfort and should be considered. Allergies (diagnosed or undiagnosed) can be affected by trace amounts of airborne matter. Airborne particulate and biological organisms can represent a serious hazard for individuals who are immune-compromised.

Air monitoring can be expensive, is often inconclusive and must be carefully evaluated when conducted.

Possible Non-Biological Causes

Building and non-building related problems can sometimes result in IAQ complaints and/or occupant symptoms, such as:

- Dusts and odors (i.e., paint, tar, etc.) from renovation projects
- Pet dander carried on clothing
- Animal or bird droppings or insect parts
- Odors from scented candles and other devices or perfumes/colognes
- Off-gassing from new furnishings, carpets, etc.
- Dry sewage drain traps that allow sewer gasses to escape
- Re-entrainment of vehicle exhaust through building openings
- Migration of odors or fumes from other work locations within the building
- Inadequate temperature control
- Inadequate humidity control
- Inadequate air distribution leading to drafty/stuffy rooms
- Inadequate lighting or glare
- Crowded rooms
- Noise and vibration
- High concentration of office equipment (i.e., copiers, fax machines, printers, etc.) in small or poorly ventilated work areas
- Ergonomic stressors (i.e., improper work station design leading to headaches, muscle aches, etc.)

- Personal factors, such as stress at work or home, allergies, etc.

Possible Biological Causes

Fungus (mold), a common bioaerosol contamination, occurs in buildings that are susceptible to water leaks and other sources of moisture. Contaminants can also be introduced into buildings from stagnant water in HVAC air distribution systems. In general, prevention of microbiological contamination is accomplished by controlling sources of moisture.

Procedure for Reporting IAQ Complaints

1. The person or persons who are affected by the indoor air quality shall contact their supervisor/department head. The supervisor/department head will notify Facilities Services (372-3227). Notification may be by telephone, e-mail, verbal, written letter or other means. No employee shall be retaliated against for initiating a complaint. Facilities Services shall be responsible for evaluating the building's mechanical systems relative to the indoor air quality complaint.
2. The complaint shall be investigated and a corrective action recommended. The complaint may be investigated and resolved by a single department (e.g. Facilities Services). However, when an indoor air quality complaint is complex or the agent(s) is/are unknown, Facilities Services will work with Environmental Health and Safety (EHS). The investigation shall be made in a timely manner based on the perceived degree of hazard.
 - a. In some cases the cause(s) of an indoor air quality complaint are obvious and an exhaustive review of the building is unnecessary. However, often the cause is unknown and a more rigorous approach must be taken to identify the agent(s). The complainant will complete IAQ forms which include a questionnaire and a diary of symptoms. These forms will be sent to the supervisor/ department head after a complaint has been reported. These forms may be used to identify potential problems. Note that other data collection tools may also be used at the discretion of the investigator.
 - b. If air monitoring for mold is requested by the complainant, and determined not necessary by EHS, mold testing may be conducted, however, it will be the responsibility of the department requesting the sampling to pay for this service. EHS can obtain mold sampling equipment, collect samples using recognized protocol and interpret the results.
3. Results of the investigation shall be communicated to the person(s) who initiated the complaint. This shall also apply to cases where the source(s) of the complaint cannot be determined. EHS shall also inform the complainant of the degree of risk (risk communication).

Avoiding IAQ Problems

You can help to avoid IAQ problems in your work area by observing the following tips:

- Do not block or shut vents or building returns.
- Observe TTU's Tobacco Use Policy.
- Do not dispose of food waste or food wrappers in your work area. Dispose of contaminated waste in receptacles that are emptied daily.
- Do not over water plants. Remove dead leaves. Break up dirt around the plant to avoid mold overgrowth in the dirt.
- Clean-up water spills immediately.
- Report water intrusion and sewage problems IMMEDIATELY to the Facilities Services.
- Minimize accumulations of paper, cardboard, and other cellulose-based materials.
- Clean your work area routinely. Remember, Custodial Services does not clean horizontal surfaces.
- Avoid concentrating electronic office equipment within offices or other small or unventilated locations.
- When possible, avoid carpeting. Do not use carpeting in high traffic areas such as entryways and hallways. If carpet is present in your work area, have it cleaned regularly.
- Do not burn candles or have other scent-producing materials in the work area.
- Avoid portable humidifiers.
- Send a work order request to the Facilities Services to remediate insect or rodent infestations.
- Allow new furnishings to off-gas before placing them in your work area. High VOC (volatile organic compound) glues and particleboard furnishings have a tendency to off-gas.



Name: _____ Title: _____

Today's Date: _____

Primary location in the building: _____ Phone: _____

Date started in building: _____ At current location since: _____

Equipment used regularly in job: _____

1. Do any of the following apply to you? If so, please describe (attach additional sheets if needed):
 - (a) History of allergies: _____
 - (b) History of respiratory diseases: _____
 - (c) Other pre-existing health conditions causing increased sensitivity to environmental pollution: _____
 - (d) Wear contact lenses? _____ If yes, for how long? _____
 - (e) Eye strain at work? (If yes, explain) _____

2. Check the best answers in this section as they apply **only to the main symptoms** you have experienced that you feel may be related to the building. Include **only those symptoms that generally occur at the same time**. Other symptoms should be noted in question #3 below.

| | (a) Symptom | Date Started | Relief Overnight | Relief During Vacation | Never Clears Up |
|--|-------------------|--------------|------------------|------------------------|-----------------|
| | Back Pain | | | | |
| | Chest Tightness | | | | |
| | Congestion | | | | |
| | Coughing | | | | |
| | Dizziness | | | | |
| | Dry Mouth | | | | |
| | Eye Irritation | | | | |
| | Fatigue | | | | |
| | Fever | | | | |
| | Headache | | | | |
| | Hearing Loss | | | | |
| | Heartburn | | | | |
| | Hoarseness | | | | |
| | Itching | | | | |
| | Muscle Aches | | | | |
| | Nausea | | | | |
| | Nose Irritation | | | | |
| | Runny Nose | | | | |
| | Sinus Problems | | | | |
| | Skin Rash | | | | |
| | Sneezing | | | | |
| | Swelling | | | | |
| | Throat Irritation | | | | |
| | (other): | | | | |
| | | | | | |



2. (continued)

(b) Symptoms occur (circle the best answer)

- (i) almost every day when in the building
- (ii) about half the time
- (iii) several days per month
- (iv) infrequently
- (v) other

(c) When are symptoms generally worst? (circle best answers)

DAILY

- morning
- afternoon
- all day
- no pattern

WEEKLY

- beginning
- middle
- end
- all week
- no pattern

YEARLY

- spring
- summer
- fall
- winter
- all year
- no pattern

(d) Worst events may be associated with:

- (i) Odors (describe): _____
- (ii) Dust (describe): _____
- (iii) Activity/Event (describe): _____
- (iv) Weather (describe): _____
- (v) Specific Dates: _____

(e) Was a physician consulted? (circle answer) YES NO

If Yes, what was the physician's opinion regarding the symptoms?

- (i) Not building-related (describe diagnosis) _____
- (ii) Building-related (describe diagnosis) _____
- (iii) Not Sure

(f) Further comments on main symptoms:

3. Describe other symptoms that you believe may also be related to the building but, do not always occur at the same time as the symptoms mentioned in question #2.

4. Circle any complaints you have about building conditions:

- | | | | |
|------------------|------------------|---------------|----------|
| Odors | Poor Ventilation | Tobacco Smoke | Too Hot |
| Noise | Poor Lighting | Dust | Too Cold |
| Other (describe) | | | |