



## PROTOCOL FOR REPORTING & RESPONDING TO INDOOR AIR QUALITY COMPLAINTS/CONCERNS

### A. PURPOSE & SCOPE

The purpose of this document is to provide guidelines for reporting and managing responses to indoor air quality concerns from occupants of offices, classrooms, shops, labs, residential spaces and athletic facilities. These guidelines apply to all Clarkson University faculty, staff, students and visitors.

### B. INTRODUCTION

Clarkson University is committed to maintaining a safe living, learning, and working environment that is free from recognized hazards and to investigate complaints that may be related to poor indoor air quality (IAQ). Although there are not specific regulations developed for IAQ in the workplace, the Environmental Health and Safety department (EHS) takes into consideration recommended guidelines from the Environmental Protection Agency (EPA), American Conference of Governmental Industrial Hygienists (ACGIH), American Industrial Hygiene Association (AIHA), and the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) when managing and investigating IAQ situations.

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

- Temperature and relative 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 IAQ 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 lifethreatening conditions such as severe asthma attacks, Legionnaire's disease or carbon monoxide poisoning;
- Promoting the spread of airborne infectious diseases;
- Producing an unfavorable living, learning and/or work 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 occupants temporarily relocated; and
- Creating potential liability problems.

### C. RESPONSIBILITIES

**Facilities & Services:** Facilities & Services is responsible for maintaining and operating all Clarkson University buildings in the condition which they are designed to operate, which includes providing adequate indoor air quality and occupant comfort within each operating building's system and parameters. This includes inspection, maintenance and repair of Heating, Ventilation, Air Conditioning (HVAC) and structural components associated with the interior and exterior of the buildings. Facilities & Services will take reasonable steps to see that HVAC systems are operating properly. Facilities & Services checks and performs filter changes in HVAC units as needed. Facilities & Services will contact Environmental Health & Safety when IAQ concerns become more complex and involve further investigation beyond their work scope.

**Environmental Health & Safety:** Environmental Health & Safety is responsible for working with Facilities & Services and the involved occupant(s) as needed to perform interviews and air quality investigations to develop a plan to assist in locating and remediating the source(s) of the occupants' IAQ concerns.

**Faculty, Staff & Students:** Clarkson University faculty, staff and students are responsible for reporting any potential indoor air quality concerns that they may have or observed to Facilities & Services or Environmental Health & Safety as soon as possible for proper investigation.

### D. COMMUNICATION

The following mechanisms shall be used to report an indoor air quality (IAQ) at Clarkson University: Any faculty, staff, student or visitor can report an indoor air quality (IAQ) concern through one of the following mechanisms:

1. **Life-threatening Emergencies:** For any life-threatening emergency, IMMEDIATELY contact 911.
2. **Potential Natural Gas Leak or Sewer Odor:** Report IMMEDIATELY to Environmental Health & Safety (315-268-6640) and Facilities & Services (315-268-4000). If it is after hours or on weekends, please contact Campus Safety & Security (315-268-6666).
3. **Non-emergency IAQ Concerns/Complaints:** Report to Facilities & Services by calling 315-268-4000 or submitting an online request through the Facilities & Services work order system (<https://intranet.clarkson.edu/administrative/facilities/>).

If Facilities & Services is unable to identify and resolve the problem or needs additional assistance, Environmental Health & Safety should be contacted at 315-268-6640.

Upon receiving an IAQ complaint, Facilities & Services will work together with Environmental Health & Safety to conduct an IAQ investigation. It may be necessary to notify the affected person's Supervisor/Manager, Human Resources, Dean of Students, Director of Residential Living and Learning and/or Assistant Dean of Students for Accommodations and keep them informed immediately and throughout the investigation process as well.

**INDOOR AIR QUALITY CONTACTS:**

Facilities & Services – 315-268-4000  
Environmental Health & Safety – 315-268-6640  
Campus Safety & Security – 315-268-6666  
Call 911 for life-threatening emergencies.

**E. INDOOR AIR QUALITY INVESTIGATION PROCESS**

Investigations and remediation of IAQ concerns is a joint effort between Environmental Health & Safety, Facilities & Services 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, Environmental Health & Safety and Facilities & Services should make it a point to keep building residents informed of progress in addressing the situation.

Once an indoor air quality (IAQ) concern or complaint is reported, the initial assessment is typically conducted by Facilities & Services and includes a review of the following:

**1. Heating Ventilation Air Conditioning (HVAC):**

- Verify that operating systems, such as heating, ventilation and air conditioning (HVAC) systems, are working properly.
- Ensure that appropriate preventative maintenance (PM) has been performed including, outside air intakes, distribution dampers, air filters, drain pans, heating and cooling coils, inside of air handling unit, fan motor and belts, air distribution ducts and VAV boxes, air humidification and controls.
- Determine if maintenance activities have recently taken place such as, cleaning, filter changes, or repairs or clean ups of water leaks.
- Verify that system is capable and set to provide adequate air exchanges for the area of concern.

**2. External Sources:**

- Identify processes with potential IAQ pollution sources, such as renovation and remodeling, painting, new carpet installation, exhaust from idling delivery or operations equipment/vehicles, pesticide/rodenticide application and smoking.

**3. Moisture Control:**

- Ensure adequate moisture control is in place for the affected area. Moisture control prevents mold growth, particularly, in basements.
- Dehumidify, when necessary, and respond promptly to floods, leaks and spills.

#### **4. Flooding Response:**

- Quickly and thoroughly dry all porous (e.g., carpet and wallboard) and non-porous materials. It is strongly recommended to start response within 24 hours and complete it within 48 hours of the flood.
- Perform extraction with wet vacuums on carpets. Dehumidifiers alone will not effectively dry wetted porous materials.
- Move or elevate furniture and equipment, such as, filing cabinets and copiers so that the flooring is able to be dried.
- Cut or drill wetted wallboard (small holes or whole bottom sections) if necessary to promote drying inside the wall cavity. Lower portions of wetted sheetrock may need to be removed and replaced.
- For water intrusion or leaks that have impacted building materials which are not able to be cleaned up within 48 hours, have been reported to Facilities & Services past the 48 hour window for cleanup, or the time of leak is unknown to Facilities & Services, Environmental Health & Safety must be notified immediately.

#### **5. Suspect Mold:**

- Environmental Health & Safety is available to conduct basic mold assessments, which include looking for signs of water damage or excess moisture and looking for visual signs of mold growth.
- In some cases, the survey may also include testing moisture levels on surfaces or within materials, using a moisture meter and/or measuring relative humidity, to evaluate areas of potential condensation. Environmental Health & Safety does not recommend sampling for mold as a general practice.
- Some basic assessments may require using a boroscope to perform visual inspections of hidden areas, such as, ventilation system ducts and wall cavities. In most cases, a visual inspection is all that is necessary to assess the seriousness of the situation and plan an appropriate response.
- A full review of Clarkson University's Mold Safety Guidelines can be found here: <https://intranet.clarkson.edu/wp-content/uploads/Clarkson-University-Mold-Safety-Guidelines.pdf>.

#### **6. Cleaning:**

- Ensure Custodial Services staff are utilizing proper methods and products, cleaning schedules, materials storage and use, and trash disposal.

If Facilities & Services is unable to identify the source of the IAQ problem and implement a fix, Environmental Health & Safety will be contacted to conduct an IAQ survey. This survey is designed to identify the root cause of the IAQ complaint and provide recommendations for resolution.

- The survey will include a visual inspection of the space and surrounding areas noting odors, unsanitary conditions, visible mold growth, staining, presence of moisture in inappropriate places, hazardous chemicals, poorly maintained filters, overcrowding, personal air cleaners, uneven temperatures, and blocked vents.
- Some level of baseline air sampling is typically conducted to determine measurement of particulate, carbon dioxide (CO<sub>2</sub>), volatile organic compounds (VOC), temperature and relative humidity concentrations. In most cases, mold sampling will not be conducted nor is it recommended.
- Occupants may be asked to complete an IAQ log to track odors or conditions to better assist in the investigation.
- Survey results will be delivered to Facilities & Services, Human Resources, and Supervisor/Manager.

If the survey conducted by Environmental Health & Safety does not yield the source of IAQ problem, a third party IAQ consultant/expert may be consulted to assist with the investigation and perform a more deep cycle assessment.

#### F. EVENTS WARRANTING IMMEDIATE REPORTING

The following events shall be reported immediately upon observation:

1. **Water Intrusion Events** - IMMEDIATELY report leaks or other water intrusion to Facilities & Services. When reporting, include the following information to the extent known:
  - a. Source and approximate quantity of water or liquid,
  - b. Affected area(s),
  - c. Damaged materials, and
  - d. Whether or not the source has been controlled.

Note: Prompt reporting in these situations is critical since 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 Facilities & Services. Events involving sewage backflows can be very serious. Do not attempt to clean or remove affected materials. Facilities & Services will manage the response.

Environmental Health & Safety is notified by Facilities & Services of water intrusion incidents on campus, the impacted building materials due to the incident and the response to the situation such as repairs conducted and wet materials dried or removed.

#### G. HOW TO MINIMIZE INDOOR AIR QUALITY PROBLEMS

Indoor air quality (IAQ) problems can be minimized in Clarkson University 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 no closer than 30 feet of any building entrance or ventilation system. A full review of Clarkson University's No Smoking Policy can be found here:  
<https://confluence.clarkson.edu/display/UPR/OM+3.1.10+Smoking+Policy>.
- Do not leave vehicles running outside, particularly near building air intakes.
- 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 Facilities & Services.
- Ensure proper operation and correct use of chemical fume hoods to reduce or eliminate exposure to volatile liquids, dusts, and mists. Report any chemical fume hood ventilation problems IMMEDIATELY to Facilities & Services.
- Avoid concentrating electronic office equipment within small, unventilated areas.
- Do not burn candles or have other heavy scent-producing materials.