

Introduction

San Jose State University is committed to providing a work environment that is free of recognized hazards and to investigating complaints that may be related to poor indoor air quality.

Though specific regulations have not been developed for IAQ in the work place, the Safety and Risk Services Unit follows 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).

Definition

Acceptable indoor air quality is air in which there are no known contaminants at harmful concentrations as determined by the Safety and Risk Services Unit and with which a substantial majority (80% or more) of people exposed do not express dissatisfaction. Inadequate indoor air quality may be caused by deficiencies in ventilation systems, contaminants such as vapors and dust generated in the work environment, or materials infiltrating from outside sources such as pollen or engine exhaust. Often symptoms are reported but no specific indoor air quality problem can be identified.

Background Information

Frequently complaints in problem buildings are related to mucous membrane and/or respiratory irritation, headache, or fatigue. Irritation of mucous membranes of the eye, nose, and throat are commonly reported by office workers. Eye symptoms include itching, redness, and irritation. Respiratory symptoms include nasal congestion, itching, coughing, and runny nose. Throat symptoms include feelings of dryness and irritation. Abnormal physical signs and/or positive laboratory tests are not necessarily associated with individuals having these symptoms. If an employee experiences any of these signs or symptoms, the employee should follow SJSU's accident / injury reporting guidelines by first reporting the complaint to their supervisor and submitting necessary forms to Safety and Risk Services Unit.

"Sick Building Syndrome" (SBS)

When a sizable percentage-usually more than 20 percent-of building occupants experience the group of symptoms listed above, the situation has become known as "sick building syndrome". Specific causes of SBS remain unknown. Insufficient fresh air (outdoor air) is sometimes associated with buildings with SBS. A single cause for SBS is unlikely. Many hypotheses must be considered in determining the cause of complaints in any particular building, including ventilation rates, ventilation system maintenance and type, and a multitude of irritants from occupant activities, microbial contamination, and off-gassing from building furnishings.

Building-Related Illnesses (BRI)

Building-related illnesses are less common, but often more serious, and may affect only a small number of building occupants. BRI is characterized by a distinguishable set of symptoms, often accompanied by physical signs and clinical abnormalities. BRI can be confirmed by a physician's diagnosis and may include infections such as legionellosis, toxic syndromes associated with exposure to chemical or physical agents, and hypersensitivity diseases, including hypersensitivity pneumonitis, "humidifier fever", asthma, and allergic rhinitis.

Request for Indoor Air Quality Investigation

Evaluation of building related complaints requires the cooperative effort of the complainant, the Safety and Risk Services Unit, and Facilities Development and Operations (FD&O). Following the initial complaint, the Safety and

Risk Services Unit will conduct an interview with the employee to determine if the symptoms are potentially related to IAQ problems. An initial report will be generated by Safety and Risk Services Unit documenting the investigation and a copy will go to FD&O and the employee.

When such a potential exists, a building investigation will be coordinated with appropriate FD&O representatives. Evaluation of the results of the building investigation results may lead to development of a program for remediation. The Safety and Risk Services Unit will conduct a follow-up investigation when remediation procedures have been completed. IAQ investigations will include the following procedures:

Employee Complaint

If an employee is experiencing irritations in which he/she feels is related to his/her workplace, the employee should complete an Indoor Air Quality Questionnaire. This form is to be forwarded to the Safety and Risk Services Unit for review. Safety and Risk Services Unit will review the form and interview the employee to determine what further action is needed. Complaints received by FD&O involving specific symptoms should be forwarded directly to Safety and Risk Services Unit for review.

On-Site Investigation

If an on-site investigation is needed, collectively, Safety and Risk Services Unit and FD&O will conduct an initial on-site investigation. The following conditions will be evaluated:

- Current project notification review and communication
- Ventilation rate or amount of fresh air coming into the building
- Operation and maintenance of HVAC system
- Location of outside air intake(s) relevant to occupant area
- Immediate outside environment (i.e. neighboring projects, relative humidity, temperature, carbon dioxide level)
- Safety and Risk Services Unit will also evaluate the work area and building for potential contaminant sources such as chemical use and storage, general housekeeping, recent renovations and/or new furnishings, activities in work area, and the history of related complaints for the building.

Phase II Studies

In some cases, initial investigation may indicate the need for Phase II studies to provide more detailed information regarding the nature of the IAQ problem. Phase II studies are conducted to provide Safety and Risk Services Unit with more analytical information about the environment. This phase of the investigation may necessitate the need for outside consultation to perform the following:

- Monitoring for chemical contaminants
- Bioaerosol monitoring
- Detailed HVAC evaluations
- Medical examinations and/or testing
- Epidemiological studies

IAQ Investigation Report and Remedial Action

Safety and Risk Services Unit will complete a written report of investigation results, including, conclusions regarding possible causes of IAQ problems. Copies of the IAQ investigation will be forwarded to the employee

who initiated the complaint, the employee's supervisor, and any other department that Safety and Risk Services Unit deems necessary.

When indicated, remedial action will be developed by Safety and Risk Services Unit, with review by the employee's supervisor and/or FD&O as needed. Remedial action that needs to be implemented by the supervisor should be completed within a reasonable period of time. This type of action could include the purchase of a non-fabric chair, removal of paper storage, relocation of printers, general housekeeping, etc. If the action requires building/HVAC maintenance or repair, then the remedial action will be coordinated with FD&O. The employee's department and/or FD&O will notify the Safety and Risk Services Unit when remedial actions have been completed. During the remediation, the department should work to arrange a suitable alternative working environment.

After Remedial Actions are Completed

The Safety and Risk Services Unit will inspect the work area within one month after remedial actions have been completed to ensure that all recommendations have been completed. The employee and his/her department will be responsible for reporting any further problems to Safety and Risk Services Unit after follow-up has been completed.

Employee(s) with continued IAQ complaints contact S&R