UCONN

ENVIRONMENTAL HEALTH AND SAFETY

Molds in the Indoor Environment
General Information

The UConn Department of Environmental Health and Safety receives many mold inquiries, especially during the summer months. Humid conditions, naturally occurring high levels of outdoor molds, alterations in workspace occupancy, leaking roofs, and/or stressed Heating, Ventilating, and Air Conditioning (HVAC) equipment are just a few factors that can result in increased moisture that may lead to visible mold growth in the indoor workplace.

General Information: Molds are naturally found everywhere in our environment, both outdoors and indoors. Mold spores, microscopic 'seeds' that allow molds to grow, float continually in the air we breathe. In fact, it is natural to have mold spores both indoors and outdoors, throughout the year. Molds can be beneficial and are a necessary part of our life cycle: acting as natural bio-degraders (paring down our landfills, enriching our compost piles) allowing plants to utilize nutrients; as flavor enhancers (the "blue" in our blue cheese); and as healers (penicillin and other medicines). Molds can also be detrimental: causing structural damage to our buildings; unpleasant odors; and health issues in sensitized individuals (allergies, triggering asthma, and other respiratory problems in susceptible individuals). It is not feasible to eliminate all molds and mold spores in the indoor environment, we coexist with them in our environment, and we are exposed to them daily. The problem arises indoors when these 'seeds' begin to grow. While mold spores are ever-present in the indoor environment, *visible mold growth* indoors is problematic.

What Causes Mold Growth Inside a Building: Molds can grow on just about any substance, as long as moisture and oxygen are available, and can present in a variety of colors (black, gray, white, pink, etc.). There has been much media focus on "black mold" as being particularly problematic. However, according to the EPA 'black mold' is not specific to any one species, nor suggestive of toxigenic potential and is generally a term used by the media. Mold needs a food source, measurable moisture (increased relative humidity or water leaks) and mild to warm temperatures. The food source can be any organic material such as dust, books, papers, animal dander, soap scum, wood, particleboard, paint, wallpaper, carpet, and upholstery. When such materials become and stay damp, especially in dark areas with poor air circulation, mold may grow. Flooding, pipe leaks, leaky roofs, moisture in walls, high indoor humidity and irregular heating/air-conditioning can create the damp environment that mold needs to grow. To prevent visible mold growth, the only factor we can effectively control is moisture.

Prevent Mold Growth in the Workplace: The key to preventing mold growth is controlling moisture. Building occupants can help maintain optimal conditions to prevent mold growth by monitoring their work areas to ensure they are kept dry and clean. Damp or wet spots should be cleaned and dried within 24-48 hours after discovery. Ensure ventilation air ducts are not blocked in your workspaces. Keep track of those areas that are prone to, or have a history of, humidity problems or leaks. If you note high humidity and/or water leaks in your workspace please submit a work order to Facilities Operations specifying it is a high humidity or water leak concern. In summer months, be cognizant of spaces that are closed for a period of time. Frequent checks or routine housekeeping in these areas will assist in limiting or preventing visible mold growth. Additionally, building or room occupants should confer with the Facilities Operations department

before turning off HVAC units in low occupancy spaces over the summer months.

Mold Control and Remediation: Once visible mold is found, it should be properly removed, and the condition that led to its growth should be corrected, i.e. remove the moisture problem that led to mold growth. Facilities Operations personnel have been trained in the cleaning and removal of visible mold growth on building materials following OSHA and EPA guidelines. In some situations, Facilities Operations may, in consultation with EHS, secure the services of a consultant to assess conditions and determine appropriate response actions, or a trained cleaning contractor to implement a mold remediation plan. Once the visible mold growth has been cleaned or removed, finding the source of the moisture problem and implementing corrective actions are necessary to prevent any future mold growth. Bear in mind that it may take time for changes to have an effect on overall building conditions, particularly during rainy and humid weather conditions. Be sure to notify Facilities Operations should any visible mold regrowth be found.

Resources: Here are some references and resources that contain useful information about molds, how pervasive they are in the environment, and methods of control.

CTDPH: Connecticut Department of Public Health: Mold

CTDPH: Indoor Air Quality Testing Should Not Be The First Move

OSHA: Preventing Mold-Related Problems in the Indoor Workplace

EPA: Environmental Protection Agency: Mold

EPA: Indoor Air Quality

UCONN: Mold Clean Up Guidelines for Custodial ad Maintenance Staff

UCONN: Facts About DIY Mold Test Kits

UCONN: Air Purifier Guidance

Contact Valerie Brangan or James Blum, at Environmental Health and Safety (x3613, or ehs@uconn.edu) with any questions or concerns regarding mold clean-up or indoor environmental quality.