

## **Selected Online Mold Resources**

### ***REMEDIATION AND GUIDELINES***

EPA: Mold Remediation in Schools and Commercial Buildings

Mold Remediation in Schools and Commercial Buildings

Source: EPA, March 2001

EPA 402-K-01-001, March 2001

<http://www.epa.gov/iaq/molds/images/moldremediation.pdf>

Morey: Cleaning Procedures for Mold

Cleaning Procedures for Mold

Source: Philip Morey, Proceeding of Healthy Buildings 2000, Volume 3, Pages 39-48, 2000

[http://www.aeris.org/Cleaning\\_Procedures\\_for\\_Mold.pdf](http://www.aeris.org/Cleaning_Procedures_for_Mold.pdf)

Guidelines on Assessment and Remediation of Fungi in Indoor Environments

Source: New York City Department of Health & Mental Hygiene

Addresses mold contamination of building components that are chronically moist or water damaged (walls, ventilation systems, support beams, etc.)

<http://www.nyc.gov/html/doh/html/epi/moldrpt1.html>

Fungal Contamination in Public Buildings: A Guide to Recognition and Management

Source: Federal-Provincial Committee on Environmental and Occupational Health, Environmental Health Directorate, Health Canada (1995, June), 517 KB PDF, 88 pages.

Provides information on molds in indoor environments, including recognition, investigation protocols, remediation, and prevention strategies.

[http://www.hc-sc.gc.ca/hecs-sesc/air\\_quality/pdf/fungal.pdf](http://www.hc-sc.gc.ca/hecs-sesc/air_quality/pdf/fungal.pdf)

Fact Sheet on Natural Disaster Recovery: Fungi

Source: OSHA

Contains recommendations on respirators and protective garments for mold remediation.

<http://www.osha.gov/OshDoc/fungi.html#>

AIHA Microbial Growth Task Force Report, 2001

In this report, the Task Force briefly reviews key aspects of existing guidance documents, identifies important gaps in those documents, and provides recommendations to address those gaps whenever possible. [Note: This document cannot be printed]

<http://www.aiha.org/Committees/documents/webmicrobial.pdf>

## ***HEALTH EFFECTS TO MOLD EXPOSURE***

Histoplasmosis: Protecting Workers at Risk

Source: CDC, September 1997

Introduces the fungal disease histoplasmosis, including exposure, diagnosis, and prevention.

<http://www.cdc.gov/niosh/hi97146.html>

Toxic Effects of Indoor Molds

Source: American academy of Pediatrics, Committee on Environmental Health, April 1998

Discusses toxic properties of molds.

<http://www.aap.org/policy/re9736.html>

Is Indoor Mold Contamination a Threat to Health?

Source: Harriet M. Ammann, Ph.D, D.A.B.T., Senior Toxicologist, Washington State Department of Health.

<http://www.doh.wa.gov/ehp/oeas/mold.html>

Adverse Human Health Effects Associated with Molds in the Indoor Environment

Source: American College of Environmental and Occupational Medicine, 2002

<http://www.acoem.org/guidelines/pdf/Mold-10-27-02.pdf>

Molds, Toxic Molds, and Indoor Air Quality

Source: Pamela Davis, California Research Bureau, California State Library, March 2001

Includes discussion of basic biology of molds, environmental conditions which favor their growth, potential human health effects, and recent research and policies. Presents difficulties associated with setting exposure limits and issues surrounding testing and remediation.

<http://www.library.ca.gov/crb/01/notes/v8n1.pdf>

The Toxic Effects of Fungal Exposure

Source: Susan Lillard-Roberts

Includes discussion of health effects mold exposure has on workers.

<http://www.mold-survivor.com/assoc.illness.htm>

**FOR IMMEDIATE RELEASE**

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**AMERICAN SOCIETY OF SAFETY ENGINEERS TO DEVELOP MOLD  
STANDARD FOR WORKER PROTECTION**

**DES PLAINES, IL** (November 5, 2003) --The American Society of Safety Engineers (ASSE) announced today that it will develop a standard aimed at protecting workers when dealing with mold remediation. The purpose of the standard, announced at the American Conference of Governmental Industrial Hygienists' (ACGIH) "Mold Remediation: The National Quest for Uniformity" symposium in Orlando, is to establish minimum requirements and recommended procedures to be implemented by employers to minimize employee exposure to mold. The proposed standard will not, however, establish an exposure level or action level for identification purposes or trigger remediation activities.

"Mold is an important safety, health and environmental issue for everyone," ASSE Environmental Practice Specialty member Mary Ann Latko, CSP, CIH, QEP, stated in her symposium presentation. "Since safety, health and environmental professionals (SH&E) are already responding to mold-related concerns and are working without a universally accepted standard from a cognizant authority, a standard aimed at protecting workers is very much needed."

Because there is no one universally accepted consensus standard that can be held as the standard of care to protect mold remediation workers in an indoor environment, ASSE petitioned the American National Standards Institute (ANSI) to be the secretariat of a canvass standard initiative, Z690, to address worker safety and health during mold remediation projects. ANSI approved the petition. Also, the ASSE Board of Directors unanimously approved the ASSE "Position Statement Regarding Mold in the Indoor Working Environment" October 27.

There are many different types of biological organisms and bioaerosol present in the indoor environment. Mold, a group of microscopic fungi, is just one of these types. These spore-producing organisms can thrive in certain indoor conditions - when there is a temperature range conducive to growth, sufficient water or moisture, and a source of nutrients or food. While ubiquitous in nature, excessive mold in the indoor environment can result in offensive odors from the volatile organic compounds released by certain molds during growth and death cycles, and destruction of building components by penetration of the filaments and hyphae produced.

Although adverse health effects related to exposure to some types of mold have been reported, at this time, there is no conclusive link to pulmonary hemorrhage nor is there conclusive evidence that mold-related illnesses are increasing. Currently there is no

consensus among SH&E and healthcare professionals as to the level of mold exposure that is acceptable in indoor environments.

Developing guidelines before the adverse health effects of the work environment are not well defined or where the science is still maturing is not a new approach. The approach defined in the 1980s to protect hazardous waste site workers, where the level of required personal protective equipment is based on immediately available direct-read instruments that provide screening results, is just one example.

"Minimizing worker exposure to mold is extremely important. We cannot wait until we are comfortable with the science of mold, we need to protect workers from potential adverse health effects now," Latko said.

Workplace situations and activities have the potential to expose workers to mold. Employers and workers need to be aware of such situations and be able to identify activities that may result in increased potential harm for workers and building occupants to be exposed to excessive levels of mold.

ASSE recognizes that some forms of mold can cause adverse health effects in some people, including the elderly, children, and persons with reduced or compromised immune systems and/or can aggravate pre-existing health conditions.

"While ASSE does not in any way discount the need to address the needs of at-risk populations, the current focus of ASSE's efforts on mold is worker protection," Latko said. "A key part of the mold debate is that as of today there is still no documentation of universal adverse health effects related to exposure to mold. In contrast, for many hazardous chemicals there are such documented universal adverse effects directly related to certain levels of exposure. For example, any person whose skin comes into contact with concentrated acid will develop a burn and any person exposed to a certain level of nitrogen gas will become unconscious and eventually die."

During her presentation, Latko described ASSE's recommended standard of care for workers, preventive measures to use for workers doing indoor mold remediation work, how to assess the mold problem, sampling and testing, interpreting the results, minimizing worker exposure to mold, remediation approaches and responses, and training and certification.

For the full report, the position statement and more information check ASSE's web site at [http://www.asse.org/prac\\_spec\\_cops\\_issues.htm](http://www.asse.org/prac_spec_cops_issues.htm). Founded in 1911, the non-profit ASSE is the largest and oldest professional safety organization and is committed to protecting people, property and the environment. Its more than 30,000 members manage, supervise, research and consult on safety, health, transportation and environmental issues in industry, government, education, labor and insurance.