



Indoor Air Quality Monitor

April 2001

 North Dakota Department of Health

Eye on Events

Satellite Broadcast

The Centers for Disease Control and Prevention will broadcast "A Public Health Response to Asthma" May 17, 2001. The broadcast can be viewed at two sites in North Dakota: the State Capitol Building, Bismarck, and the Central Valley District Health Unit, Jamestown. For information about attending the broadcast at one of these sites, contact Jesse Green, North Dakota Department of Health, at 701.328.5188 or Jim Michael, Central Valley Health District, at 701. 252.8130. For additional information about the broadcast, visit <http://www.cdc.gov/phtn/asthma/>

NEHA Conference

The National Environmental Health Association will hold an indoor air quality conference in Atlanta, Ga., June 30 through July 2, 2001. Interested parties should call NEHA at 303.756.9090 for registration information.

Asthma Workshop Held in Washington, D.C.

The National Environmental Health Association (NEHA) held an asthma and indoor air quality (IAQ) seminar in Washington, D.C., Feb. 21 through 23, 2001. Seminar speakers included John Martyny, Ph.D., CIH, Tri-County Health Department, Colorado; Doug Kladder, NEHA; Susan M. Conrath, Ph.D., MIH, EPA; and Kristy Miller, EPA.

North Dakota was represented at the seminar by James Michael, Central Valley Health District, and Jesse Green, North Dakota Department of Health.

After covering an overview of IAQ issues, the seminar focused on indoor asthma triggers and how to

address them effectively.

Asthma episodes can be triggered by various stimuli. One major asthma episode stimuli is the presence of environmental triggers, including dust mites,

environmental tobacco smoke, animal dander and droppings, and fungi. The most effective method of addressing environmental triggers is source control. In other words, if you remove the source, you remove the asthma trigger.

The IAQ seminar also



addressed large building indoor air quality, including heating, ventilating and air conditioning (HVAC) system configuration(s). In addition, the results of a baseline study comparing large building IAQ issues around the country were presented.

Eliminating Mold Can Improve Indoor Air Quality

Mold is one of the major indoor air quality issues in North Dakota. Mold can seriously affect both indoor air quality and the health of a building's occupants.

Molds procreate by releasing spores into the air. These spores and other toxins released by viable mold colonies may cause a wide variety of adverse health

effects. In addition, people may experience adverse health effects from nonliving molds such as nonviable spores and cellular structures. *(Mold ... cont. page 2)*

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Many people do not realize the health effects of having mold in their homes. Allergic reaction is the most common effect of mold exposure. Symptoms may include watery eyes, runny nose, sneezing, nasal congestion, itching, coughing and difficulty breathing.

colony. Molds require the presence of moisture and nutrients from a substrate in order to colonize a surface and grow.

Because molds are advantageous organisms and will decompose a wide variety of materials, it is essential to maintain effective moisture prevention and

found in moist areas or areas associated with high humidity, including rooms with humidifiers, bathrooms, kitchens, laundry rooms and crawl spaces. Other places susceptible to mold growth are unvented combustion heaters, appliance drip pans, window sills (condensation), and places where water intrusion has occurred.

Once mold is found, steps should be taken to (1) find and address the moisture source and (2) clean or replace moldy materials.

Cleaning up the mold without first addressing the moisture problem will most likely be ineffectual, since mold probably will return.

Moldy porous materials such as sheetrock, ceiling tile, wood and carpet cannot be cleaned and disinfected in a manner that would eliminate all

remnants of mold growth. Instead, discard and replace these materials, taking precautions not to disturb the colonies and release more spores or mycotoxins into the air. Dry and disinfect nonporous materials.

More information can be found at the EPA website: <http://www.epa.gov/iaq/pubs/moldresources.html>



People differ greatly in their reactions to mold exposure; one person may experience acute allergic reactions while another may experience no symptoms at all.

Molds are extremely ubiquitous and advantageous. Mold spores can be found virtually everywhere and need only opportune conditions to blossom into a full-blown

control within a building. However, once mold colonies have formed, they often can survive in much less moisture than was required to establish the colony. In addition, reintroduction of even a slight amount of moisture into an environment where an inactive mold colony exists can trigger new mold growth.

Typically, mold can be

Internet Resource

The Local Government Environmental Assistance Network (LGEAN) provides environmental management, planning and regulatory information to local government officials, managers and staff. For information, visit the LGEAN website at <http://www.lgean.org/html/about.cfm>. To access indoor air quality resources, click “Hot Topics” and select “Indoor Air Quality.”

Colleague of the Quarter



The Hausauer family: Madison, Jim, Patty and Morgan (left to right)

This issue’s colleague of the quarter is Jim Hausauer of Minot, N.D.

Jim is married and has two daughters ages 9 and 6. His wife, Patty Hausauer, is a teacher at Minot Public Schools.

Jim is a native of McClusky and a graduate of McClusky High School. He received a bachelor’s degree in biology with concentrations in chemistry, physics and physical science from Minot State University.

Currently, Jim is a registered environmental health specialist at First District Health Unit in Minot. His duties include inspection and enforcement of sanitation at food establishments, water and waste water inspections, nuisances, rabies investigations, solid and hazardous waste issues, and air quality (indoor and outdoor).

During his free time, Jim enjoys outdoor activities. Summer hobbies include water sports and cabin life, and in the winter Jim enjoys amateur basketball.

Tool Talk: IAQ Equipment Review

One piece of equipment that can assist indoor air quality professionals is a gas detection pump kit. Gas detection pumps are relatively inexpensive and simple to use.

The gas detection pump is used in conjunction with gas detection tubes that contain specific reagents. The sealed ends of the tube are broken and the tube is inserted into the pump, which draws air through the tube. The presence of the specific contaminant being tested causes the reagent in the tube to change color; the extent (length) of the color change indicates the approximate concentration of the contaminant.

Tubes for detecting various contaminants are available from environmental suppliers. The following contaminants can be detected by the gas detection pump:

- Carbon dioxide (CO₂)
- Carbon monoxide (CO)
- Acetone
- Benzene
- Formaldehyde
- Hydrogen sulfide
- Ozone
- Sulfur dioxide

The gas detection pump kits do have limitations. For instance, this instrument is

not a precision measurement tool; the values acquired are approximate measures of the contaminant in the air, not exact quantities. In addition, the detection tubes are not reusable and often have a shelf-life and special storage requirements. The shelf-life and the reactivity of the reagent in the tubes to light or temperature also may hinder accurate measurements.

Gas detection pumps and tubes can be purchased from various environmental product suppliers.

Currently, the North Dakota Department of Health has a pump available for loan

to local public health personnel with consideration that the pump will be returned as expeditiously as

possible. The availability of tubes from the department will depend upon supply.



Sensidyne Gastec gas detection pump kit with gas detection tubes.



Gas detection tubes for Gastec gas detection pump.

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