Ohio Building Environment Report

Ohio Building Environment Council of Ohio | Volume 20, Issue 2

June 2008

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SAVE THE DATE!

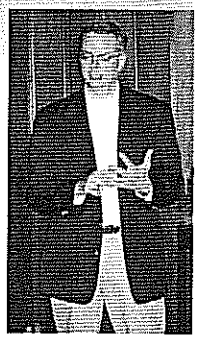
October 15-16, 2008

BECO Annual Conference

Ramada Plaza Hotel

Columbus, OH

From the President



Summer Greetings from El Presidenté...

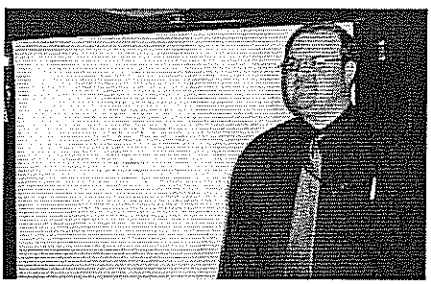
I have pleasure of writing this from the comfort of the passenger seat of our esteemed Treasurer's vehicle (Ron McConnell) returning from yet another successful BECO luncheon. This time it was the Mid-Ohio BECO regional luncheon at the Buckeye Hall of Fame Café in Columbus on May 30th.

The guest speaker was Chad Brown, RS of the Ohio Department of Health. The topic was an update of Jarod's Law. The update was informative and generated quite a few questions. The PowerPoint file will be made available for download from the BECO website for those members who are interested.

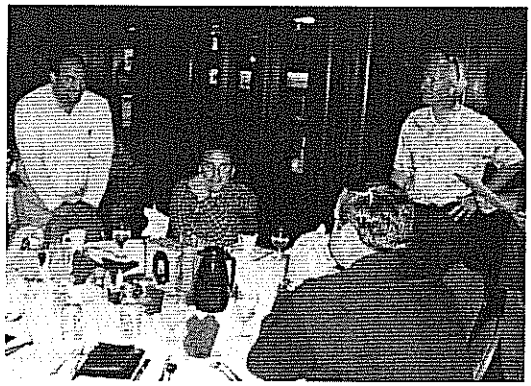
As you work and play this summer, please keep in mind the 2008 BECO Fall Conference October 15-16. We are finalizing the line up so get your suggestions in to Kim or your local Board member. Registration reminders will be mailed toward the end of August.

As always feel free to e-mail your comments to wingram@tsitraining.com or you can call me at (440) 942-1200. Enjoy this latest OBER and I hope to see you this coming year!

Wayne Ingram, President
BECO



Chad Brown, RS ODH



Left to right: Angelo Giannakos, Smoot Corp., Joe DiGeronimo, Precision Environmental, Chad Brown, ODH, Gary Cox, BECO.

Southwyck mall to remain open after inspections

Article published Monday, May 12, 2008
by IGNAZIO MESSINA
BLADE STAFF WRITER

South Toledo's Southwyck Shopping Center will remain open after its management addressed the city's demands to contain asbestos contamination and respond to other problems by Monday.

City of Toledo inspectors on Thursday discovered black mold and said airborne asbestos could escape from the shuttered Montgomery Ward store into the public areas.

The city threatened to shut down the mall at 2040 South Reynolds Rd. in 72 hours unless the mold was cleaned and the asbestos was sealed off.

The mall's management answered the city Friday with a third-party inspector, who they said found no visible evidence of mold growth or airborne asbestos.

Kenneth C. Baker, an attorney with Eastman & Smith Ltd., which represents the mall, in a statement Monday said the mall was safe.

"Work to address the alleged violations over the weekend consisted of routine cleaning and maintenance, replacement of some ceiling tiles, completion of some plumbing repairs in the women's restroom and a further strengthening of the barricade between the shopping center and the Montgomery Ward store," the statement said.

The mayor said owners of the mall still must address inadequate fire suppression systems by June 2 in some "unused corridors of the mall."

One In Five Rooms Is 'Highly Contaminated' With Hidden Mold

"Nowadays, no one would agree to live in housing which presents any risks towards lead or carbon monoxide. Tomorrow, molds and other chemical substances will probably follow"

Surely your bathroom is fungus-free once you've wiped the mold off the tiles? Not according to a study by French scientists in the Royal Society of Chemistry's Journal of Environmental Monitoring. They report that almost one in five rooms studied with no visible mold was in fact "highly contaminated" by fungus which could aggravate conditions such as asthma.

The study also found that bedrooms and living rooms were no less contaminated than bathrooms and kitchens – "hidden" fungus was not only airborne but found in carpets and soft furnishings, and behind wallpaper, and was often colorless and odorless.

When assessing a building's level of contamination, many authorities rely on trained investigators to see or smell the fungus – Sandrine Roussel, lead author of the article, and collaborators say this is not enough. By completing questionnaires and sampling the air in hundreds of homes in France, they found that what you see is not always what you get.

"Nowadays, no one would agree to live in housing which presents any risks towards lead or carbon monoxide. Tomorrow, molds and other chemical substances will probably follow," says Roussel.

Mold in the home is not just unsightly and indicative of poor hygiene standards; it is known to aggravate a range of medical conditions, such as asthma, rhinitis and hypersensitivity pneumonitis. This study set out to establish if more could be done to identify fungus as exacerbating these complaints.

Surprisingly, the study found that factors commonly held to increase mold contamination had relatively little effect. The age of the building, presence of pets and even outdoor and indoor temperature had little bearing on fungus concentration.

As for airborne fungi, it made little or no difference if the room was regularly used to dry clothes, or contained indoor plants – factors that public health inspectors had previously highlighted as key issues.

The researchers found that significant factors in levels of contamination were structure, such as lack of ventilation or a ground floor apartment, or accidental damage, such as water damage.

Journal reference: Roussel et al., J. Environ. Monit., 2008, DOI: 10.1039/b718909eAdapted from materials provided by Royal Society of Chemistry.RESOURCE/SOURCE: Science Daily on May 1, 2008

Allergens

By Dr. Harriet Burge, EMLab P&K Chief Aerobiologist and Director of Scientific Advisory Board

Nature and Importance

Allergens are complex molecules that can stimulate an antibody response in susceptible individuals. Allergens are usually proteins and exposure commonly results in an immunoglobulin E (IgE) response (immune defense against foreign objects, i.e. bacteria and viruses). The ability to respond to allergens with an IgE response is genetically controlled. Repeated low-level exposure is generally thought to lead to sensitization, and subsequent to sensitization, a response may occur with further exposure. It is important to note that not all sensitized individuals develop symptoms. Symptoms result when the appropriate allergen attaches to IgE antibodies on the surface of MAST cells, causing these cells to release histamine, the chemical that leads directly to symptoms. Symptoms may be upper respiratory (hay fever), lower respiratory (asthma), systemic (anaphylaxis), or may occur on the skin (hives). Several of these symptoms may be present simultaneously.

Allergens may also lead to very high levels of specific immunoglobulin G (IgG) and to sensitized cells in the lung. Intense exposure to the allergen is generally necessary and sensitization may occur over a relatively short period of time. Sensitization may lead to breathing difficulties. With continued exposure, sensitization may lead to difficult breathing, fever, cough and chest tightness. This disease is called hypersensitivity pneumonitis and innate risk factors are unknown.

Nomenclature

Allergens are named for the organism from which they are purified. Thus, dust mite allergens are called Der f, Der p, and Blo t for *Dermatophagoides farinae*, *Dermatophagoides pteronyssinus*, and *Blomia tropicalis*, respectively. Multiple allergens may be derived from a single organism, and these are numbered as they are discovered (e.g., Der f 1, Der f 2, etc.).

Sources

Allergens may be produced by almost any organism, although some organisms tend to produce either more allergens or more potent allergens. Table 1 lists common indoor allergen sources.

Organism	Allergens	Source within Organism	Exposure Source
Dust mites	Der f 1, Der p 1, Blo t 1, etc.	Fecal material	Dust, especially in bedding
Cockroaches	Bla g 1, Bla a 1	Skin secretions	Dust, especially in kitchens
Cats	Fel d 1, etc.	Skin secretion	Airborne, accumulates in dust
Dogs	Can f 1	Skin secretions, urine	Airborne, accumulates in dust
Rodents	Rat r 1, Mus m 1	Urine	Airborne, accumulates in dust
Fungi	Alt a 1, Pen c 1, Asp v 1, etc.	Digestive enzymes	Airborne with spores; accumulates in dust

Most bacteria do not produce IgE stimulating allergens. However, some Gram positive bacteria (primarily *Mycobacterium*, thermophilic actinomycetes, and, rarely, *Bacillus*) can stimulate IgG and can sensitize cells in the lung leading to hypersensitivity pneumonitis.

Sampling

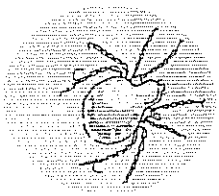
Sampling for allergens almost always involves collection of dust samples, although air samples can be collected for those allergens that are readily airborne (cat, rodent, some fungi). Dust samples are collected from the area where exposure is most likely to occur. For dust mite allergens, this is almost always bedding. For cat and dog allergens, usually living or family room dust is used. For cockroach and rodent, kitchen dust should be collected. Dust collections are best made from a carefully measured surface, although the nature of the surface will strongly influence how much dust is collected from the area. Because of this fact, dust concentrations are usually measured as milligrams / gram of dust collected.

Continued on page 4

Allergens *(Continued from page 3)*

Analysis

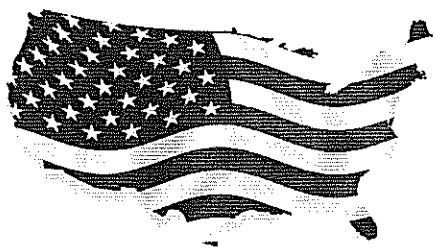
Allergen analysis involves the use of the enzyme linked immunosorbent assay (ELISA). This assay can be done in several ways. If suitable monoclonal antibodies for the specific allergen are available, sandwich assays are used, where one antibody is coated onto microtiter plates, the allergen-containing suspension added, then a second specific antibody labeled with a color-producing compound is added. The allergen attaches quantitatively to the second antibody and the intensity of color is related to allergen concentration in the sample. A less specific approach must be used for allergens for which monoclonal antibodies are not available. In general, inhibition assays are used in these cases. Dilutions of polyclonal antibodies (antibodies derived from relatively crude allergen preparations and containing many allergens) are mixed with the unknown allergen extract. The antibodies bind to the allergen, preventing attachment to allergens bound to microtiter plates. The unknown allergen mixture without added antibody is used as a control, and the amount of inhibition caused by the added antibody is proportional to allergen concentration. These assays are relatively non-specific, but have the advantage of being broad spectrum and not dependent on the presence of specific identified allergens.



Interpretation

Allergen concentrations that actually lead to sensitization and to symptoms are not known precisely, and all available information is derived from epidemiological studies. This means that the commonly used guidelines are simply that, and some people will respond to concentrations much lower or much higher.

For most of the allergens that have been studied, concentrations >2µg/gram of dust are considered a risk for sensitization, and 10µg/gram of dust is considered a risk for symptom development in sensitized individuals. Concentrations for cockroach allergens appear to be much lower and are not well-defined. High concentrations of cockroach allergen should be considered to represent a cockroach infestation. Fungal allergens have been poorly studied, and few of the common fungi are represented by good ELISA assays.



Have a safe and happy 4th of July!

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Vacation is as Important as Sleep

"Lack of sleep and play both have a negative impact on you reflex time, general resilience and ability to ward off infection."

The Importance of Vacation

by Barbara Reinhold

Monster Contributing Writer

So what's your vacation got to do with the bottom line? Everything, say industrial psychologists, but that fact doesn't seem to have penetrated very well in corporate America. The majority of people still take work with them on vacation in one form or another, and more than 25 percent of corporate people don't take any absolute downtime at all. So what's the problem?

Vacation is as Important as Sleep

It's a little like sleep deprivation, according to physicians and psychotherapists. Just as lack of sleep impedes your ability to think clearly and act decisively, lack of playtime keeps you from taking in information effectively and seeing the totality of a situation. Lack of sleep and play both have a negative impact on your reflex time, general resilience and ability to ward off infection. Recreation deprivation also makes you cranky, and often more than a little critical of the people in your organization who do have the good sense to take care of themselves.

Every time I have clients who tell me their direct reports are slacking off, I respond with the question, "when did you have your last vacation?" Almost always, the answer is some variation of, "well, I don't really do vacations that are about relaxing and rejuvenating. There's just too much to get done."

You're Hurting More Than Yourself

The bitter irony is that the vacation-deprived usually think they're doing everybody a favor by continuing to work themselves to the brink of exhaustion. But the reality is that they're costing everyone - their coworkers, their direct reports, their organizations, their families and themselves. Work addiction is an insidious thing. Like other addictions, you usually have to bottom out before you can summon the courage to change.

Oregon fines Michigan asbestos-abatement company $24,000

The Associated Press

SALEM, Ore. (AP) - The state of Oregon has fined a Michigan company more than $24,000 for violating safety laws in an asbestos removal project last year at Candalaria Mall in south Salem.

A spokesman for the Oregon Department of Environmental Quality says the penalties against Performance Abatement Services of Melvindale, Mich., were the result of an inspection in September. The company has appealed. The Oregon DEQ alleges in a civil lawsuit that the company committed willful violations, such as allowing the accumulation of asbestos debris and failing to keep ceiling tiles and vinyl flooring wet enough in the removal process.

Courtesy of *AP Michigan News: Michigan, National and World News and Videos*

Ohio worker's estate claims 73 defendants negligent for asbestos-related death

The estate of an Ohio man who died from mesothelioma filed an asbestos complaint in Madison County Circuit Court May 5, alleging his disease was wrongfully caused.

According to the complaint, Paul Bowen was employed from 1951 to 2004 as a laborer, truck driver, kiln operator, miner and mechanic at various locations.

Bowen's wife was employed as a machine operator, maintenance worker, finisher and striper at various locations.

Bowen's estate claims that his wife would on many occasions work with and around asbestos and asbestos-containing materials.

Dust created by working with and around asbestos and asbestos-containing products would permeate the person and clothing of the decedent's wife, the complaint states.

His estate claims his wife would carry the asbestos dust on her clothing home with him where it would again become airborne.

"The plaintiff would be repeatedly exposed to this asbestos dust from his wife's person and clothing," the complaint states.

Bowen's estate also alleges he was exposed to asbestos during non-occupational work projects including home and automotive repairs, maintenance and remodeling.

Bowen was diagnosed with mesothelioma on Oct. 8, 2007, and died on Dec. 31.

The suit names 73 defendants that include Bondex International, CBS, ConocoPhillips, Ford Motor Company, General Motors, Goodyear, John Crane, Owens-Illinois, Pharmacia, Shell Chemical and Yarway Corp.

"The plaintiff's exposure and inhalation, ingestion or absorption of the asbestos fibers was completely foreseeable and could or should have been anticipated by the defendants," the complaint states.

The estate claims the defendants knew or should have known that the asbestos fibers contained in their products had a toxic, poisonous and highly deleterious effect upon the health of people.

Bowen's estate also alleges that the defendants included asbestos in their products even when adequate substitutes were available and failed to provide any or adequate instructions concerning the safe methods of working with and around asbestos.

The estate further claims that the defendants failed to require and advise employees of hygiene practices designed to reduce or prevent carrying asbestos fibers home.

As a result of the alleged negligence, Bowen's estate claims he was exposed to fibers containing asbestos and developed a disease caused only by asbestos which disabled and disfigured him prior to his death.

Bowen's estate also claims that he has sought, but has been unable to obtain, full disclosure of relevant documents and information from the defendants leading him to believe the defendants destroyed documents related to asbestos.

"It was foreseeable to a reasonable person/entity in the respective positions of defendants, that said documents and information constituted evidence, which was material to potential civil litigation-namely asbestos litigation," the complaint states.

The estate alleges that as a result of each defendant breaching its duty to preserve material evidence by destroying documents and information it has been prejudiced and impaired in proving claims against all potential parties.

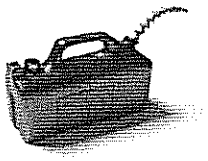
"Plaintiff has been caused to suffer damages in the form of impaired ability to recover against defendants and lost or reduced compensation from other potentially liable parties in this litigation," the complaint states.

The estate is seeking at least $250,000 in compensatory damages for negligence, willful and wanton acts, conspiracy, and negligent spoliation of evidence among other allegations.

"In addition to compensatory damages, an award of punitive damages is appropriate and necessary in order to punish the defendants for willful, wanton, intentional and reckless misconduct and to deter them and others from engaging in like misconduct in the future," the complaint states.

Bowen's estate is represented by Nicholas Angelides of SimmonsCooper in East Alton.

The case has been assigned to Circuit Court Judge Daniel Stack.



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LEAD EXPERTS

Lead Hazard Abatement Training Schedule

2008

Type, Length and Pricing	Location	Course Month / Dates
Worker Initial - 32 Hour $595 Per Trainee	Toledo Cleveland Columbus	Please see the Contractor Initial and Refresher courses listed below. These classes satisfy the State of Ohio's requirements for Worker classes. A Worker enrolling in these classes will be charged the Worker's fee shown in this section. Please call the number shown below if you have any questions.
Worker Refresher - 8 Hour $195 Per Trainee	Toledo Cleveland Columbus	
Contractor Initial - 40 Hour $795 Per Trainee	Toledo Cleveland Columbus	May 5 – 9 Sep 29 – Oct 3 Apr 21 – 25 Jun 16 – 20 Aug 25 – 29 Oct 20 – 24 Dec 1 – 5 Oct 27 - 31
Contractor Refresher - 8 Hour $195 Per Trainee	Toledo Cleveland Columbus	May 15 Sep 11 Apr 17 Jun 12 Aug 14 Oct 9 Dec 11 Jul 24 Nov 13
Inspector Initial - 24 Hour $475 Per Trainee	Toledo Cleveland Columbus	Aug 18 – 20 May 19 – 21 Jul 28 – 30 Sep 22 – 24 Dec 15 – 17 Jun 2 – 4
Inspector Refresher - 8 Hour $195 Per Trainee	Toledo Cleveland Columbus	May 14 Sep 10 Apr 16 Jun 11 Aug 13 Oct 8 Dec 10 Jul 23 Nov 12
Risk Assessor Initial - 16 Hour $320 Per Trainee	Toledo Cleveland Columbus	Aug 21 – 22 May 22 – 23 Jul 31 – Aug 1 Sep 25 – 26 Dec 18 – 19 Jun 5 – 6
Risk Assessor Refresher - 8 Hr $195 Per Trainee	Toledo Cleveland Columbus	May 14 Sep 10 Apr 16 Jun 11 Aug 13 Oct 8 Dec 10 Jul 23 Nov 12
Lead Renovator - 8 Hour $195 Per Trainee	Toledo Cleveland Columbus	May 13 Oct 16 Aug 12 Nov 20 Jul 22 Dec 8

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On Site Classes Available, Closed Enrollment - Your Location / Your Students - Priced per Day, Call for More Information

3/28/08

Saving the Future While Preserving the Past

Some simple changes can make old houses surprisingly energy-efficient

There's just something about historic homes that makes people want to renovate them, and that something is often related to their appearance. In fact, retaining an authentic appearance is a common goal for both homeowners and builders who are renovating historic homes, and retaining original woodwork, windows and other features is one good way to meet that objective.

But as much as homeowners love their old houses, they hate the drafty windows, uneven room temperatures and sky-high utility bills that are usually part of owning a piece of local history—but definitely not part of its charm. As a remodeler, you're in a position to help them have the best of both worlds: a sense of history *and* a sensibility toward the environment.

Although the sustainable building movement's most prominent presences—the Leadership in Energy and Environmental Design (LEED) for Homes program and the National Association of Home Builders' Green Building program— focus on new construction, their principles are easily adaptable to period-renovation projects. The underlying concept of sustainable design is that buildings represent the sum total of a series of interrelated systems, and that applies whether a structure is newly constructed or several hundred years old.

"It's basically the same; you just have to analyze the systems," says Ann Raab, founder and designer for Port Townsend, Wash.-based Olympic Design Group. She cites the relationship between building envelopes and air quality as an example of system interrelatedness. "As you make things tighter, you have to think about indoor air quality, because they probably didn't think about this the first time around."

Focus on efficiency Reducing energy use, especially heating and cooling, is a primary goal of green renovation, and a recent Chicago effort has shown that simply weatherizing an existing house can result in a home that operates more efficiently and less expensively. The Chicago Green Bungalow Initiative purchased four of the city's historic brick bungalows and renovated them with sustainable principles in mind. The city has since tracked the homes' energy performance and costs. The pleasant surprise: Some of the simplest improvements can yield the biggest paybacks.

"When the initiative was put together, part of what we wanted to do was reduce operating costs," says Charles Shanabruch, executive director of the Historic Chicago Bungalow Association, the city-supported group that oversaw the effort. He added that just improving insulation and sealing air leaks contributed the biggest savings. "Dollar for dollar, the payback is one year."

The group used R43 attic insulation instead of the standard R30 product. The crews also ensured that all conduit raceways and recessed-can lighting fixtures were insulated and sealed. In addition, wall-insulation products were specified at R15 rather than the typical R9, and in some cases R13 insulating batts were installed in the basements. (For a full report on these efficiency efforts and paybacks, go to http://egov.cityofchicago.org/webportal/COCWebPortal/COC_ATTACH/GreenBungalowRpt.pdf)

Shanabruch encourages remodelers to consider a blower-door test to identify spots where air is leaking into a dwelling. In these evaluations, all windows and doors are shut, a heavy canvas flap is attached over an exterior doorway, and a large fan set to exhaust is placed in the middle of the flap. When the fan is turned on, technicians are able to identify leaks by using a small smoke-emitting device to identify infiltration or even just by feeling around the windows and doors.

Other considerations Sustainable design and construction involves more than simply reusing existing materials and improving efficiency levels, though. The philosophy also incorporates tactics for improving the air quality of homes that now may have less fresh air circulating through them as a result of better sealing and insulation. For example, the Chicago bungalow designers specified paints and other finishes with low levels of volatile organic compounds to help ensure inside air didn't become dangerous to breathe.

Contractors working in older homes also may have to decide how to deal with once-common products, such as lead paint and asbestos pipe insulation, which have since been found to be dangerous to handle. As Raab notes, renovators may decide to seal this material to keep it intact, rather than attempt costly and potentially dangerous abatement procedures.

In the end, regardless of any efficiency upgrades or finish selections a renovator may opt to incorporate, the simple choice to reuse an existing structure instead of demolishing and building new is probably the most important step in determining a project's "sustainable" impact. This, more than the showcased heat pumps and turf-covered garage roofs, is the lesson Chicago's bungalow renovators wanted their project to teach, according to Shanabruch.

"The energy saved by not letting these houses get run down and have to be torn down is just huge," he says.

And so is the satisfaction of knowing that a historic home has been given both the respect it deserves—and the chance to stand for another century or two without apology for old-fashioned inefficiency.

BEC of Ohio

Mark your calendars for:

BECO WELCOMES Members

Please add these members in your 2008 membership directory as their member information was not included. Thank you.

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Kurt Varga, contact

Phone: 614-895-9323

Hina Environmental Solutions -
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Columbus, OH 43204
Brian Hina, President

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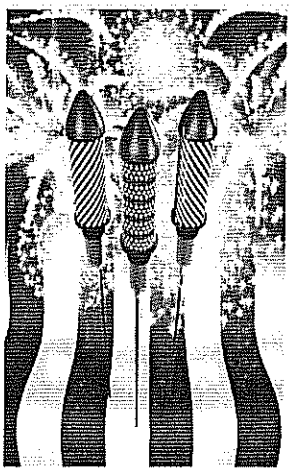

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