

Past Presentations

(23rd-April-2003 through 12th-October-2016)

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Topics: **Research** | **Energy/IAQ** | **Communities** | **Pollutants** | **Green/Healthy Buildings** | **Ventilation/Humidity**

Research

“Well Living Lab (Rochester, MN)” October 12, 2016 [52].

Dr Nicholas Clements, a Director of Delos Labs, Nicholas.clements@delos.com.

Dr Clements presented on the collaborative research facility known as the Well Living Lab, which is dedicated to investigating how indoor environmental quality impacts occupant health and wellness by utilizing six reconfigurable modules to create a variety of indoor space-types. Pilot studies to explore potential future research that incorporate O3, PM and VOC measurements were briefly discussed.

“What is Happening with Indoor Air Quality?” June 8, 2016 [48]. Dr Melissa Bilec (mbilec@pitt.edu, 412.648.8075)

Presented by Dr Bilec, LEED AP, Deputy Director, Mascaro Center for Sustainable Innovation, U. Pittsburgh, and Dr Anna Siefken (left), VP Strategic Engagement, Green Building Alliance. The presentation reviewed efforts to establish an IAQ baseline for individual buildings, the impacts of energy reductions on IAQ, and efforts to develop a scalable IAQ protocol.

“The Effects of Commercial Buildings on Energy Use, Health and Performance, including a brief analysis of the Indoor Air Quality Procedure (IAQP) in ASHRAE 62.1,” October 8, 2014 [43]. William (Bill) J. Fisk, LBNL (wjfisk@lbl.gov).

In this presentation, Mr. Fisk addressed the interplay between energy-efficient ventilation, pollutant concentrations and transport, particle control, and occupant health and productivity. The information presented was based on controlled laboratory studies, extensive multi-disciplinary field studies, modeling, and the review and synthesis of extensive data. The presentation and audio are available from the CIAQ website for a limited time.

“Evaluation of Steam Cleaning in Air Handling Unit (AHU) Coil Sanitization and Energy Conservation,” June 5, 2013 [39]. Dr. Rajiv R. Sahay, Mr. Francisco Aguirre (800.422.7873)

“How Indoor Airborne Flu Viruses Contribute to the “Flu Season,” February 13th 2013 [38]. Steven Welty (703.904.0200, steve@greencleanair.com)

The presentation will cover current explanations for the “flu season”, including: (1) how people eject flu viruses into the air; (2) how people in a room are infected by airborne flu; (3) the different forms that airborne flu viruses take; (4) how far airborne flu viruses travel in a room, inside HVAC units and circulate within buildings; (5) conditions that increase airborne flu virus

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survival; and, (6) the technologies available to sterilize, capture and/or inactivate airborne flu viruses.

“Some Observations from Radon & How They Could Apply to Chemical Vapor Intrusion,” June 1, 2011 [33].

Dr. Henry Schuver (202.308.8656, schuver.henry@epa.gov)

The discussion focused on similarities between radon and vapor intrusion and the implications for monitoring, risk assessment and volatile organic chemical (VOC) vapor intrusion (VI) management. Dr. Schuver is with the Office of Resource Conservation and Recovery, U.S. EPA.

“National Retrospective Evaluation of DOE’s Weatherization Assistance Program: IAQ Research,” June 9, 2010 [30].

Martin Schweitzer (schweitzerrm@ornl.gov, 919.929.0995) Oak Ridge National Laboratory (ORNL), Dan Cautley (dcautely@ecw.org, 608.238.8276x144), Senior Project Manager, Energy Center of Wisconsin.

Messrs. Schweitzer and Cautley introduced the Weatherization Assistance Program Evaluation Project, and discussed a field study to be performed under the evaluation.

The field study will investigate the impact of weatherization on a number of IAQ parameters in homes.

“CDC H1N1 Research Program and Projects,” Feb. 3, 2010 [26].

Dr. Michael Bell (zzb8@cdc.gov)

Dr. Bell discussed aspects of disease transmission and some of the gaps in our understanding of the relationship between particle size and infection risk from used masks/respirators. He also reviewed what is known about contact transmission, droplet transmission, the detection of influenza viruses in air, and studies in progress. Visit <http://www.cdc.gov/media/subtopic/sme/bell.htm> to learn more about Dr. Bell and the Division of Healthcare Quality Promotion, National Center for Preparedness, Detection, and Control of Infectious Diseases, Centers for Disease Control (CDC).

“U.S. Green Building Council (USGBC) IAQ Research Agenda,” Feb. 3, 2010 [27]. Mr. Tom Dietsche (tdietsche@usgbc.org)

Mr. Dietsche reviewed the origins of the USGBC research agenda, and the two primary research areas: (1) measuring pollutants and stressors, and (2) occupant health and performance. Mr. Dietsche is a Research Program Specialist with the US Green Building Council (USGBC). Visit <http://www.usgbc.org/ShowFile.aspx?DocumentID=3402> for more information about the USGBC and their Research Agenda.

“Layered GAPTM Photo Catalytic Oxidation, PCO,” Oct. 17, 2007 [19].

Mr. Dan Briggs (dbriggs@genesisair.com, 806.745.7000)

Genesis Air/Government Scientific discussed the potential that Photo Catalytic Oxidation, or PCO, as an emerging technology in the HVAC industry has to significantly improve indoor air quality.

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PCO also has the potential to limit the intake of outdoor air with a significant energy savings over classical designs. This new layered GAPTM PCO — patents pending — methodology uses cost-effective, non-ozone producing UVC Germicidal Irradiation, in combination with titanium dioxide coated mesh, to aggressively oxidize and reduce all carbon-based VOCs, airborne mold, bacteria, viruses, and hydrocarbons found in indoor environments. Layered PCO methodology is categorized in ANSI/ASHRAE Standard 62.1 as an IAQ procedure, which allows the design professional the opportunity to choose an alternative to the prescriptive Ventilation Rate Procedure method. GAPTM technology can be used as a stand alone system or incorporated into existing or new HVAC systems.

“NCEMBT Program on Filtration and Air Cleaning,” April 19, 2006 [13].

Dr. Douglas Kosar (dkosar@uic.edu, 312-413-2646, <http://www.erc.uic.edu>); Dr. James Freihaut (814.863.0083, jdf11@psu.edu, <http://www.engr.psu.edu/ae/iec>); Dr. J. Zhang (315.443.1366, jszhang@syr.edu, <http://www.energysystems.syr.edu>). For more information on NCEMBT, visit <http://www.ncembt.org/index.html>.

The National Center for Energy Management and Building Technology, or NCEMBT, in conjunction with three of its university partners — University of Illinois at Chicago, Penn State University and Syracuse University — has a significant research program under way in filtration and air cleaning. Specifically, SU has completed an initial series of contaminant or particulate and VOC pull-down tests on six portable and two in-duct air cleaning devices in its existing environmental chambers.

“Building Assessment Survey and Evaluation Ventilation Data,” July 20, 2005 [10]. Dr. Andrew Persily, National Institute of Standards and Technology (301.975.6418, andyp@nist.gov)

Persily discussed his analysis of the ventilation data produced by EPA’s Building Assessment Survey and Evaluation, or BASE, study. EPA’s BASE study included a range of measurements in 100 randomly selected U.S. office buildings. Among other things, BASE characterized the ventilation systems and made selected measurements of ventilation performance. The National Institute of Standards and Technology analysis assessed ventilation performance parameters, such as outdoor air intake and supply airflow, produced a comparison of parameters determined by different methods and a comparison of parameters to design values and industry standards.

“Program Needs for Indoor Environments Research,” April 28, 2005 [9].

John Girman, Senior Science Advisor, Indoor Environments Division, U.S. EPA (202.343.9317, girman.john@epa.gov)

Girman discussed the Indoor Environments Division’s document describing EPA’s research needs for the indoor environment. He also reviewed the development of the Program Needs for Indoor Environments Research, or PNIER, document. PNIER is a comprehensive document that addresses a wide range of indoor air quality and indoor environments topics. Visit <http://www.epa.gov/iaq/pdfs/pnier.pdf> for more information on PNIER.

“The NCEMBT Agenda on IEQ Research,” Oct. 20, 2004 [7].

John Wimer, COO/National Center for Energy Management and Building Technologies (703.299.5633, jwimer@ncembt.org)

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The National Center for Energy Management and Building Technologies, or NCEMBT, was established in 2003 by the National Energy Management Institute and the University of Nevada in Las Vegas, with support from EPA and the Department of Energy. Its research mission is to improve the efficiency, productivity and security in new and existing U.S. buildings. The center develops and disseminates synergistic and complementary solutions to issues involving energy management, indoor environmental quality and security.

“EPA’s ORD-IAQ Research Program,” Oct. 22, 2003 [3].

Jim Jetter, Air Pollution Prevention and Control Division, National Risk Management Research Laboratory (919.541.4830, jetter.jim@epa.gov)

In addition to background information on the National Risk Management Research Laboratory’s mission and organization, Jetter outlined the lab’s principal research areas, including: indoor source characterization; IAQ modeling; risk management; bio-contaminants; and building security. Jetter also discussed the lab’s IAQ research test house, chamber testing facility/capability; and their various evaluations, investigation and testing activities.

Energy/IAQ

“The Building America Program”, June 3, 2015 [45].

Eric Werling (eric.werling@ee.doe.gov), DOE-Department of Energy, Building Technologies Program; available on request from ciaq@epa.gov.

“Reduced Energy Use through Reduced Indoor Contamination in Residential Buildings,” June 6, 2007 [16].

Davor Novosel, Chief Technology Officer, National Center for Energy Management and Building Technology (703.299.5633, dnovosel@ncembt.org, <http://www.ncembt.org/index.html>)

The information available to consumers on the effectiveness of air cleaners is limited, especially for the combined removal of VOCs and particulates. A standard method of test for the removal efficiency of air cleaning devices under such conditions is also lacking. This project evaluated six off-the-shelf portable and two in-duct air cleaning devices. The tested products utilize different technologies for gas and particulate removal including sorption, media filtration, ultraviolet-photo catalytic oxidation (UV-PCO), electronic precipitation and air ionization. The potential effectiveness and energy benefit of using such devices to clean re-circulated air to decrease the outdoor air intake and reduce the ventilation-related energy costs are briefly discussed and compared.

Communities

“Healthy Homes Evaluator Certification Credential,” October 12, 2016 [50]. Larry Zarker (BPI) (HH training network), lzarker@bpi.org.

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“National IAQ Needs Assessment for Indian Country”, June 8, 2016 [49].

Andy Bessler (Andy.Bessler@nau.edu), National Tribal Air Association (NTAA) Project Director, Institute for Tribal Environmental Professionals (ITEP), N. Arizona University, Flagstaff, AZ.

“Tobacco-Smoke Exposure in Children Who Live in Multiunit Housing,” October 12, 2011 [34]. Dr. Jonathan Winickoff, AAP; Harvard Medical School.

The millions of children and adults that occupy millions of multifamily and public housing units would benefit if smoke-free policies were instituted. Smoke-free is one of several risk management strategies within the risk-reduction context for multiunit housing, albeit a very important one. Radon risk-reduction is another. Occupants would benefit from smoke-free and radon risk-reduction policies. Smoking in combination with exposure to radon in indoor air has a synergistic effect, significantly increasing the risk of lung cancer.

“Communities in Action for a Renewed Environment,” Feb. 18, 2009 [23].

An overview of the Communities in Action for a Renewed Environment (CARE) program; its mission; and opportunities for participation. The CARE approach is to foster collaborative work at the community level in: identifying potential sources of exposure to toxics; setting priorities for risk reduction; and create self-sustaining partnerships to improve the local environment (<http://www.epa.gov/care>).

“Update on Community Action for a Renewed Environment,” July 9, 2006 [14]. For more information about CARE, visit <http://www.epa.gov/care>.

Pollutants

“Smoke-free: Clearing the Air in Public Housing,” June 8, 2016 [47]. Dr Douglas Levy, (DLEVY3@mgh.harvard.edu, 617.643.3595)

Dr Brian King, Deputy Director for Research Translation in the CDC’s Office on Smoking and Health (OSH) gave a brief introduction; Dr Levy presented. Dr Levy is an Assistant Professor of Medicine, Harvard Medical School (Boston, MA). Second-hand smoke causes lung cancer, heart disease, and stroke in adults and exacerbates asthma in children. Dr Levy discussed the results of his research regarding the Boston Housing Authority’s 2012 adoption of a smoke-free policy, and the changes in indoor air quality and the impact on occupants/residents.

“Spray polyurethane foam (SPF) and isocyanates”. Feb. 4, 2015 [44].

What are the latest emissions studies telling us? What are the latest recommendations regarding the manufacture, application, and use of SPF? The presenters aim to answer these and other questions, and provide an overview of ongoing and future activities. Also, an article in the Journal of Occupational and Environmental Medicine (JOEM), (Vol 57, Number 1, January 2015), speaks to this topic. The presenters were Carol Hetfield, Katherine Sleasman and Mark Mason of EPA, and Dustin Poppendieck of NIST.

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“Impacts of Source Control and Ventilation on Formaldehyde in New Homes,” February 5, 2014 [41]. Brett Singer, (bcsinger@lbl.gov, 510.486.4779; DOE, Lawrence Berkeley Lab (LBL))

The research examines the relationship between ventilation, emission rates, sources, and air concentrations of formaldehyde.

“On the Toxicity of Flame Retardants in the Building Environment: What to Do About It,” February 2, 2011 [32]. Dr. Arlene Blum, Visiting Scholar, UC Berkeley, and Executive Director, Green Science Policy Institute; visit <http://www.greensciencepolicy.org/> (arlene@GreenSciencePolicy.org).

“PCBs in Caulk,” Oct. 21, 2009 [25].

Dr. John McCarthy, President of Environmental Health and Engineering, Inc. (800.825.5343, DShore@eheinc.com, www.eheinc.com)

McCarthy discussed the management of risks from polychlorinated biphenyls, or PCBs, in building materials, particularly caulk. The manufacture of PCBs was banned by EPA in 1979. PCBs were used extensively in caulking materials produced before 1971. McCarthy reviewed its prevalence in schools, homes and commercial buildings, and the associated mitigation and remediation measures and costs. He noted that several forces are driving the need for the risk management of PCBs in building materials, including compliance with the Toxic Substances Control Act, public interest, litigation and building occupant and owner concerns. View EPA's [news release](#) on this topic dated Sept. 25, 2009.

“Swine H1N1 Influenza A: Transmission of Flu Viruses in Indoor Air: HVAC System Protection Options,” June 3, 2009 [24].

Steven Welty, CAFS, CIE, LEED AP (703.927-7532, greencleanair@aol.com)

Welty's presentation addressed the generation and life stages of infectious droplets and droplet nuclei; how flu viruses are distributed and circulated within office buildings; the conditions that affect virus longevity; and the effectiveness of the technologies and systems available to sterilize or capture flu viruses.

“Ozone Impacts in the Indoor Environment,” Feb. 13, 2008 [20].

Greg Brunner, IED, U.S. EPA, (202.343.9052, brunner.gregory@epa.gov)

Ozone is a common outdoor air pollutant that can migrate indoors where it can react with chemicals commonly found in the indoor environment and form harmful and irritating by-products. The sources for these reactive indoor chemicals are ubiquitous and include occupants, building materials and cleaning products. This presentation presents highlights from a growing body of literature on this topic, including several analyses recently completed by scientists at the Lawrence Berkeley National Laboratory with data from EPA's Building Assessment Survey and Evaluation, or BASE, study of indoor air quality in office buildings.

“Radon ASD Moisture Study,” Oct. 17, 2007 [18].

Brad Turk, Environmental Building Sciences Inc. (TurkEBSI@aol.com)

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Turk of Environmental Building Sciences and the Southern Regional Radon Training Center at Auburn University presented findings from an exploratory study on the impact of active soil depressurization, or ASD, on moisture levels in basements. ASD systems are commonly installed to control indoor radon levels. The field study, conducted in three Pennsylvania homes, found that the systems caused significant seasonal reductions in basement moisture and changed air flow patterns within the houses. Topics on the conceptual modeling, technical approach and analysis of data were discussed. The presentation is included in the minutes for this meeting.

“Radon in Large Buildings,” April 21, 2004 [5].

David Wilson, Oak Ridge National Laboratory (865.435.9890, dvw@ornl.gov)

Wilson outlined the scientific basis of Oak Ridge National Laboratory’s, or ORNL’s, non-residential protocol and the lessons learned. Since 1988, ORNL’s radon program has collected more than 80,000 radon measurements and performed hundreds of mitigation in large nonresidential buildings. Analyses and modeling of the testing, diagnostic and mitigation data led to the development of a proposed nonresidential protocol to guide testing and approaches for successful mitigation.

“Anti-microbial Pesticide Use in HVAC Systems, and Strategy for Controlling and Inhibiting Indoor Mold Growth,” April 23, 2003 [1].

Tracy Lantz (703.308.6415, lantz.tracy@epa.gov); Laura Bailey, Office of Pesticide Programs, U.S. EPA (703.308.6212, bailey.laura@epa.gov)

Lantz outlined the Office of Pesticide Program’s, strategy on anti-microbial pesticide use in HVAC systems. Bailey outlined the Office of Pesticide Program’s strategy for controlling and inhibiting indoor mold growth.

Green/Healthy Buildings

“Towards Healthy Schools: Reducing Risks to Children,” October 12, 2016 [51]. Claire Barnett, Executive Director, Healthy Schools Network (HSN), cbarnett@healthyschools.org.

Ms Barnett presented on the 4th triennial state of the states’ data and policy report, researched and published by HSN, and its state and national partners. This report finds fewer public schools and more children enrolled in those schools; more children with asthma and with special education needs; and fewer dollars and fewer staff in schools -- a combination which will result in more problems in children's attendance and ability to learn. New information on climate and schools, "fence line" schools, and new research indicating the lack of public health services for children at risk or with exposures is also presented. Also noted: Healthy People 2020 findings of a decline in reported activities in school IAQ, IPM, chemical management, and water quality.

“Green Building Initiative (GBI) Green Globes,” October 7, 2015 [46]

Vicki Worden <Vicki@thegbi.org> www.thegbi.org

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By the Executive Director of GBI; provided an update on how the Green Building Initiative (GBI) has evolved since its launch in 2004, including a review of its product offerings and technical criteria relating to IAQ. Vicki has facilitated development of the technical criteria within Green Globes through its ANSI consensus process. She discussed this process and provided a broad overview of Green Globes, as well as the proposed changes to the Indoor Environment criteria. ANSI/GBI 01-2010 is the basis of Green Globes for New Construction today.

“Facility Indoor Air Quality Assessment,” February 5, 2014 [40].

John Sherwood (321.867.1210, John.W.Sherwood@nasa.gov; Industrial Hygiene Program Manager, NASA, Kennedy Space Center (FL)).

The facility indoor air quality assessment approach developed by NASA, includes an IAQ scoring and assessment tool that should be of interest to federal facility managers.

“Renovating Occupied Buildings: Managing and Assuring IAQ,” June 6, 2012 [35].

Ed Light, CIH (301.924.6264, ELight@building-dynamics.com)

This topic should be of immediate interest to GSA and Federal tenant agencies, not only for managing renovations, but also for phased occupancy of new buildings where initial employees are located near ongoing construction activity. In the private sector, IAQ management during construction is covered by ANSI* and LEED, but does not receive serious attention in most projects until occupants complain. This CIAQ presentation will help to bring more awareness to this issue and the value of incorporating IAQ into project planning and management. *See SMACNA IAQ Guidelines for Occupied Buildings under Construction, 2nd Edition; ANSI/SMACNA 008–2008.

“IAQ Solutions for Stationary Engineers,” June 9, 2010 [29].

Thomas C. Tighe, Director, Stationary Affairs, International Union of Operating Engineers. (202.778.2647, Ttighe@IUOE.org)

Mr. Tighe highlighted *Indoor Air Quality Solutions for Stationary Engineers* and the training necessary to maintaining good IAQ in commercial facilities. The IUOE and American Technical Publishers collaborated in the effort to produce this comprehensive technical and detailed document w/an interactive CD-ROM. The content ranges from health concerns to contaminants, testing and sampling, and prevention; visit

http://www.go2atp.com/stores/1/Indoor_Air_Quality_Solutions_f_P343.cfm

“The Indoor Air Quality Guide: Best Practices for Design, Construction and Commissioning,” Feb., 3, 2010 [28].

Dr. Andy Persily (andyp@nist.gov)

Dr. Persily described how the Guide was conceived and created and produced collaboratively by ASHRAE, EPA, BOMA and SMACNA. Among many other aspects, Dr. Persily discussed the Guide's organization into eight objectives and explored some of the sample strategies for addressing specific problems, e.g., vapor intrusion. For a look at the *Guide* visit

<http://www.ashrae.org/publications/page/1936>. Visit

<http://www2.bfrl.nist.gov/profiles/profiles.asp?lastname=persily> for more on the Indoor Air Quality and Ventilation Group at the National Institute for Standards and Technology (NIST).

“Building Air Quality-An Update,” Oct. 15, 2008 [22].

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Ed Light, CIH (301.924.6264, ELight@building-dynamics.com)

Trends in indoor air quality investigations were considered, along with more recently published work addressing resolution of occupant complaints. Also, implementation of the pioneering EPA/National Institute for Occupational Safety and Health Guide since its 1991 publication was reviewed.

“GREENGUARD’s Indoor Air Quality Product Certification and Labeling Programs,” June 6, 2007 [17].

Carl Smith, CEO, GREENGUARD Environmental Institute (800.427.9681, csmith@greenguard.org, www.greenguard.org)

This presentation discussed the basic requirements that a low-emitting products certification/labeling program must address. The GREENGUARD Certification Program for Children and Schools/Cleaning Products was used as a case study. Indoor air quality product certification and labeling programs must fulfill a number of requirements in order to pronounce a product or group of products as low emitting. Fundamental principles must be established, including: testing methodology; emission criteria; laboratory qualification; sample selection; frequency of testing; control measures; and accountability.

“Indoor Environmental Quality Report, and National Building Information Model Standard,” Feb. 7, 2007 [15].

Nanne Davis Eliot, project manager, National Institute of Building Sciences (202.289.7800, ext.125, neliot@nibs.org)

The U.S. Access Board contracted with the National Institute of Building Sciences, or NIBS, to develop an IEQ report on the factors that limit access to buildings for individuals with sensitivities to chemicals and electromagnetic fields. The IEQ report addresses: operations and maintenance; design of “Cleaner Air Rooms”; design and construction; and building products and materials. The CIAQ presentation covered the entire report, with a focus on building design, construction, products and materials. For more information, visit <http://www.nibs.org>.

“IEQ and Kennedy Space Center,” Jan. 18, 2006 [12].

Bill Brodt, NASA Facilities Engineering and Real Property Division, (202.358.1117, Brodt.William@nasa.gov)

Brodt discussed NASA’s program to increase the health and productivity of building occupants and related current NASA activities. Sub-topics included sustainability, life-cycle facility costs, best practices, maintenance guidance and NASA’s Reliability Centered Maintenance program. Brodt also outlined the Kennedy Space Center’s joint base operating systems contract approach to indoor air quality.

“Healthy School Environments Assessment Tool,” Oct. 19, 2005 [11].

Bob Axelrad, Indoor Environment’s Division, U.S. EPA, (202.343.9315, axelrad.bob@epa.gov)

Axelrad described and demonstrated a new software tool designed to help school systems conduct

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voluntary self-assessments of their schools for all environmental, health and safety hazards and track the status of facility conditions school by school. The software is available on EPA's Healthy School Environments Web site at <http://www.epa.gov/schools>. The tool also includes content from other Federal agencies, including the National Institute for Occupational Safety and Health Safety Checklist Program for Schools, the Consumer Product Safety Commission's playground safety guidance, the Centers for Disease Control/DASH's School Health Index, and the Department of Education's Office of Safe and Drug-free Schools Crisis-Planning guidance, among others.

“Creating a More Healthful, Less Toxic Built Environment,” Feb. 24, 2005

[8]. Dr. Arthur Weissman, President/CEO Green Seal, Inc. (202.872-6400, aweissman@greenseal.org, www.greenseal.org)

Weissman outlined Green Seal's origins and mission and discussed its focus on promoting the purchase and production of products, services, purchasing choices and operations to reduce the impact on the environment. Weissman discussed the relationship between toxins, non-toxic alternatives, the importance of standards, and worker health and safety and Green Seal's product certification program. He also described Green Seal's green facilities and audit/assistance programs.

“HUD's Weatherization Plus Health Protocol,” July 21, 2004 [6].

Ellen Taylor, Office of Healthy Homes and Lead Hazard Control (202.755.1785)

The Weatherization *Plus* Health, or WPH, program utilizes the existing structure of weatherization programs to implement an enhanced weatherization service in combination with improvements for healthier residential living conditions and higher overall quality of service. The WHP adds two levels of service to core weatherization programs — “do no harm” and “improve IEQ.”

Ventilation/Humidity

“ASHRAE Standard 62.1-2013: The IAQ Procedure and LEED,” June 4th 2014 [42] Chris Muller, Purafil (770.662.8545 x349, cmuller@purafil.com)

The ability to achieve IAQ goals while reducing energy consumption is a valuable benefit to using the “Ventilation for Acceptable Indoor Air Quality” procedure (ASHRAE Standard 62.1-2013). The presentation: (1) discussed the current status of the Indoor Air Quality Procedure (IAQP); (2) reviewed the applicable provisions of the Standard for use with the LEED IAQP pilot program; (3) reviewed the indoor air quality models in use; and (4) gave examples of the IAQ Procedure's successful use in certifying LEED buildings. There was also be a discussion of current activities for making it easier to validate the IAQ Procedure and make it more useful to the engineering community.

“Control of the Microbial Community Affiliated with Heat Exchangers of HVAC Systems,” February 13th 2013 [37].

Dr. Michael Schmidt (843.792.9532, schmidt@musc.edu)

Microbial growth in heating ventilation and air-conditioning (HVAC) systems, with the subsequent contamination of indoor air is of increasing concern. The findings of two comparative studies on the

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efficacy of metallic copper were conducted. The principal conclusion drawn from both studies was, a limited intervention to replace aluminum with copper heat exchangers resulted in a significant change to the microbial population resident on the heat exchangers. That result led to a significant decrease in the conditioned air's fungal burden.

“Application of Observational Checklist for Indoor Dampness and Mold,” October 13, 2010 [31]. A presentation by Dr. Ju-Hyeong Park (gzp8@cdc.gov), and Dr. Michelle R. Martin (jjc8@cdc.gov)

The goal of the assessment tool is to provide valuable information for motivating remediation, prioritizing intervention, and evaluating remediation effectiveness. NIOSH is partnering with the Maine Indoor Air Quality Council (MIAQC) and the University of Connecticut Health Center, and with school districts in Maine and Connecticut to pilot the tool's use.

“ASHRAE’s Ventilation Standard 62.1,” June 11, 2008 [21].

Three presentations on ASHRAE Standard 62.1 Ventilation for Acceptable Indoor Air Quality were made: an overview by **Andy Persily** (National Institute of Standards and Technology; andyp@nist.gov) on the standard; on the Ventilation Rate Procedure, or VRP, by **Dennis Stanke** (Trane; dstanke@trane.com); and on the Indoor Air Quality Procedure, or IAQP, by **Chris Muller** (Purafil; cmuller@purafil.com). During the course of the discussion, **Alexandra Sullivan** (Sullivan.alexandra@epa.gov) of EPA’s Office of Atmospheric Programs/Climate Protection, gave a brief description of the Energy Star program and noted that one of the most commonly asked questions concerned the IAQP and its application. Subsequent to the meeting, **Ryan Colker** of ASHRAE provided a list of resources on using ASHRAE 62.1.

“DOE’s Humidity Control Technology Showcase Trailer: 2003 Experiences With ORNL and 2004 Opportunities for CIAQ,” Jan. 21, 2004 [4].

Douglas Kosar, University of Illinois at Chicago (312.413.2646, dkosar@uic.edu)

“Revision of ASHRAE Standard 62: Ventilation for Acceptable Indoor Air Quality,” July 23, 2003 [2]. Dr. Andrew Persily, NIST (301.975.6418, andyp@nist.gov)

Dr. Persily discussed the revisions to ASHRAE Standard 62. His overview included: the “State of the Standard” and Addenda; related efforts, such as smoking, space design guide and Standard 62.2; Addendum 62n, Ventilation Rate Procedure; and ASHRAE indoor air quality applications.

*A reverse-chronological index of the presentations by title is available at <https://www.epa.gov/indoor-air-quality-iaq/federal-interagency-committee-indoor-air-quality>