



[<http://www.epa.gov/iaq/ciaq/index.html>]

The NEXT CIAQ MEETING is Wednesday, June 11th 2008 (1:00–3:30 pm)

~ Meeting Minutes ~

These minutes include: (A) final agenda; (B) member Agency updates (p.); and (C) information and summaries related to the ASHRAE and EPA presentations (p.9); this is page 1 of 10.

This meeting's attachments can be found with the minutes on the CIAQ website:

1-Carbon-free FB Workshop ([Federal Buildings Workshop DRead-ASHRAE](#)).

2-High Performing Buildings Caucus ([HP Buildings Caucus-DFT Scope.doc](#)).

3-Proposed Academy ([National Academies-NAEnvDesign-Proposal.pdf](#)).

The GSA and EPA provisions of the Energy Independence and Security Act (2007)

4-EISA Evaluation ([EISA-IAQ-IEQ 12-FEB-08.pdf](#))

5-Energy Independence and Security Act (EISA) Subtitle E Summary (Schools)

The two presentations:

6-ASHRAE Building Renewal 13-FEB-08 Dread

7-Ozone Impacts in the Indoor Environment, Greg Brunner/John Girman (EPA)

NOTE: See Section (C) for the ASHRAE related attachments #1, 2, 3, 4 and 6.

(A) Final AGENDA

Welcome, Introductions & CIAQ News/Updates - Tom Kelly & Phil Jalbert

[EPA Meeting Room #152, 1310 L St., NW, Washington, DC 20005-4113]

Updates from CIAQ Member Departments & Agencies

1-NIST-National Institute for Standards & Technology, *Cindy Reed or Andy Persily*

Federal R&D Priorities Report on Energy Efficient, Sustainable & High Performance Buildings; ASHRAE

2-GSA-General Services Administration, *David Marciniak and Don Horn*

Energy Independence & Security Act (EISA); IAQ/IEQ Requirements

3-NIOSH-National Institutes of Occupational Safety & Health, *Ju-Hyeong Park*

Three recent publications on Respiratory Illness, Respiratory Morbidity, Aircraft Fungal Modeling

4-EPA-Environmental Protection Agency, *Tom Kelly*

EISA schools requirements; radon; schools; asthma; large buildings; and Partnership for Clean Indoor Air (PCIA).

5-CPSC-Consumer Product Safety Commission), *Joanna Matheson*

Ozone generators and strong sensitizers

Note regarding ASHRAE 62.1. Many of you indicated a strong interest in having a discussion at this meeting on ASHRAE 62.1 regarding the IAQ Procedure (Sec.6.1.2) versus the Ventilation Rate Procedure (Sec.6.2). Thanks to all of you that indicated such an interest. However, because of key participant personal schedule conflicts, that discussion is now expected to take place during the June 11th CIAQ meeting.

ASHRAE Presentation. As a prelude to June 11th, Doug Read provided a brief outline of what ASHRAE is doing relative to its new HQ office renovation, intended to be a near net zero renovation. Doug is

Program Director of Government Affairs, ASHRAE. See Section (C).

EPA Presentation. *Ozone Impacts in the Indoor Environment*, by Gregory Brunner, EPA Indoor Environments Division (brunner.gregory@epa.gov, 202-343-9052).

Next Meeting: Wednesday, June 11th 2008 (1:00–3:30 pm). Directions to the meeting are available from the CIAQ website <http://www.epa.gov/iaq/ciaq/index.html>. Meetings are usually held in Meeting Room 152 of EPA's offices at 1310 L St., NW, Washington, DC 20005-4113. For CIAQ related questions, contact Philip Jalbert (ciaq@epa.gov, 202.343.9431), EPA Indoor Environments Division (IED).

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Visit the CIAQ website at <http://www.epa.gov/iaq/ciaq/index.html>, or, join the CIAQ listserv to receive meeting notices, minutes and other CIAQ news; to subscribe, send an email with a blank 'subject' line to: [ciaq-subscribe@lists.epa.gov](mailto:ciaq-subscribe@lists.epa.gov).

**(B) Updates from CIAQ Member Departments & Agencies**

- 1-NIST-National Institute for Standards & Technology, *Andy Persily*
- 2-GSA-General Services Administration, *David Marciniak and Don Horn*
- 3-NIOSH-National Institutes of Occupational Safety & Health, *Ju-Hyeong Park*
- 4-EPA-Environmental Protection Agency, *Tom Kelly*
- 5-CPSC-Consumer Product Safety Commission), *Joanna Matheson*

**1-NIST, National Institute for Standards & Technology (and ASHRAE)**

1.1-Federal R&D Priorities Report: Under the leadership of DOE and NIST, several federal agencies are developing a document called Federal R&D Priorities for Energy Efficient, Sustainable, and High Performance Buildings. This effort is being conducted under the Building Technology Subcommittee, which is part of the National Science and Technology Council's Committee on Technology. The goal of the report is to identify the research and development areas that must be pursued to achieve substantial reductions in energy consumption and greenhouse gas (GHG) emissions for buildings and to sustain human health, habitation, and environmental resources. The report is still being drafted and is being circulated to several federal agencies for comment. A public and private sector workshop is being planned for April to gather additional input. For more information on the effort, contact Andy Persily at 301 975-6418, [andyp@nist.gov](mailto:andyp@nist.gov).

1.2-Source Characterization Standards for Volatile Organic Compounds: NIST is working on a project to develop standard reference materials and associated measurement techniques for consistent determination of volatile organic compound (VOC) emissions from indoor materials and products. NIST is currently working with Virginia Tech to develop a prototype reference material for emissions testing. Virginia Tech has developed the capability to load a pure polymer film with VOCs that would have an emission profile similar to a typical "dry" building material. By measuring the VOC-loaded polymer properties, it is possible to independently determine its emission rate, making it a good candidate for a reference material. This month, NIST will be using its two stainless steel chambers to characterize the emission properties of the reference material and continue development of an associated test method to calibrate emissions test chambers. Related activities include plans to develop an ASTM guide for validating methods used to determine VOC emissions from indoor materials/products, and plans to form a source characterization working group to address a number of the testing and labeling issues for low VOC-emitting products. For more information on the effort, contact Cindy Reed at 301 975-8432, [chreed@nist.gov](mailto:chreed@nist.gov).

**2-ASHRAE: Standard 62.2, Environmental Health Committee and IAQ Guide**

SSPC 62.2 continues to work on potential addenda addressing various issues including requirements for low-rise multifamily residential buildings, credits for different ventilation system types (e.g., exhaust vs. balanced), and changes to the infiltration credit. The draft companion guideline to Standard 62.2 completed public review with minimal comments and will be considered for publication after minor edits.

The ASHRAE Environmental Health Committee is continuing work on Position Documents on airborne infectious diseases and un-vented combustion appliances. The Committee recently drafted a title, purpose and scope for a revision of ASHRAE's IAQ Position Document.

Over the current Society year, EHC will be working on three emerging issue briefs:

- What are roles & responsibilities for professional engineers related to environmental health?
- Unknown and unintended health implications of sustainable development/design?
- Air Conditioning in hot/humid climates with modular equipment.”

For more information on the emerging issue briefs or other EHC topics, contact Steven Emmerich at 301 975-6459, [steven.emmerich@nist.gov](mailto:steven.emmerich@nist.gov).

ASHRAE is continuing to work on an Advanced IAQ Design Guide under a cooperative agreement with EPA. This effort is being pursued as a joint effort with AIA, BOMA, SMACNA and USGBC. The goal of the document is to provide guidance on best practices for achieving good IAQ in commercial and institutional buildings. A 60% draft of the document will be available for peer review from February 19<sup>th</sup> through March 7<sup>th</sup>. Individuals or organizations interested in reviewing and submitting input to the effort should go to the following website to download the draft and comment form: <http://www.ashrae.org/technology/page/678>.

POC: Andy Persily, chair of the project Steering Committee, at 301 975-6418, [andyp@nist.gov](mailto:andyp@nist.gov).

## **2-GSA, General Services Administration**

The GSA update focused on the Energy Independence and Security Act of 2007 (Enacted December 19, 2007) and was given by phone in two parts; the first (below) by Don Horn, and the second by David Marciniak (see GSA section 2.2 below).

### **2.1-Summary of GSA's Responsibilities Contained in the EISA of 2007.**

(POC: Donald Horn, [Donald.Horn@gsa.gov](mailto:Donald.Horn@gsa.gov))

**2.1.1-Office of Federal High-Performance Green Buildings (OFHPGB)** The “Energy Independence and Security Act of 2007,” enacted on December 19, 2007, establishes the Office of Federal High-Performance Green Buildings (OFHPGB) to provide high-performance green building information and disseminate research results through public outreach, education, and the provision of technical assistance government-wide. The OFHPGB must be established in the General Services Administration (GSA) by February 16, 2008.

**2.1.2-The Federal Director** The OFHPGB will be lead by a Federal Director appointed by the GSA Administrator. The Federal Director is responsible for coordinating the activities of the OFHPGB with the activities of the Office of Commercial High-Performance Green Buildings (OCHPGB) and ensures full coordination of high-performance green building information and activities within GSA and all relevant agencies (at a minimum: EPA; the Office of the Federal Environmental Executive; the Office of Federal Procurement Policy the Department of Energy; the Department of Health and Human Services; DoD; the DOT; the National Institute of Standards and Technology & the Office of Science and Technology Policy.) .

The Federal Director's primary responsibilities include:

1. Identifying and developing Federal high-performance green building standards consistent with the “Energy Conservation and Production Act” for all types of Federal facilities;
2. Identifying within the planning, budgeting, and construction process all types of Federal facility procedures that may affect the certification of new and existing Federal facilities as high-performance green buildings under the provisions of the “Energy Conservation and Production Act”;

3. Establishing green practices that can be used through the life of a Federal facility;
4. Reviewing & analyzing current Federal budget practices & life-cycle costing issues, including:
  - 4.1 Identifying, reviewing and analyzing current Federal budget and contracting practices that affect the achievement of high-performance green buildings, including the identification of barriers to high-performance green building life-cycle costing and budgetary issues, and
  - 4.2 Developing guidance and conducting training sessions with budget specials and contracting personnel from Federal agencies and budget examiners to apply life-cycle cost criteria to actual projects;
5. Identifying tools to aid life-cycle cost decision-making;
6. Exploring the feasibility of incorporating the benefits of high-performance green buildings, such as security benefits, into a cost-budget analysis to aid in life-cycle costing for budget and decision-making processes;
7. Recommending language for uniform standards for use by Federal agencies in environmentally responsible acquisitions;
8. Coordinating with OMB to review the budget process for capital programs with respect to alternatives for green, self-sustaining technologies to address the operational needs of Federal facilities in times of national security emergencies, natural disasters, or other dire emergencies;
9. Developing (with the Commercial Director) and recommending a high-performance green building research plan that covers emissions, day lighting, ventilation, heating, cooling, system control moisture control, mold, maintenance, cleaning pest control, acoustics, public transportation access, and the health, comfort, performance and productivity of occupants and which promotes the development of high-performance green building measurement tools; and
10. Developing and carrying out (in consultation with EPA) a comprehensive IAQ program for all federal facilities to ensure the safety of Federal workers and facility occupants during new construction, renovations, and in existing facilities.

**2.1.3-Public Outreach.** The Federal Director is responsible for conducting public outreach to inform individuals and entities of the information and services available government-wide. The Federal Director must:

1. Establish and maintain a national high-performance green building clearinghouse that is also available on the Internet;
2. Identify and recommend educational resources for implementing high-performance green building practices, including security and emergency benefits and practices; and
3. Provide access to technical assistance, tools and resources for constructing high-performance green buildings, particularly tools to conduct life-cycle costing and life-cycle assessment.

In addition, by June 15, 2008, the Federal Director, in coordination with the Commercial Director, must establish a senior-level Federal Green Building Advisory Committee. The Federal Director must identify, and every 5 years reassess, improved or higher rating standards recommended by the Committee. The Federal Director, Commercial Director, and the Committee are also responsible for surveying existing research and studies relating to high-performance green buildings. The Committee will consist of both Federal and non-Federal members. The total of non-Federal members on the Committee at any time shall not exceed 15.

**2.1.4-Reporting Requirements** By March 17, 2008, the Federal Director must identify incentives to encourage the expedited use of high-performance green buildings and related technology in the operations of the Federal Government in accordance with the requirements of the “Energy Conservation and Production Act” including through the maximum feasible retention of financial savings in the annual budgets of Federal agencies for use in reinvesting in future high-performance green building initiatives.

By December 19, 2010, the Federal Director must submit to Congress a report that:

1. Identifies within the planning, budgeting, and construction process all types of Federal facility procedures that may affect the certification of new and existing Federal facilities as high-performance green buildings under the provisions of the “Energy Conservation and Production Act”;
2. Identifies inconsistencies, as reported to the Advisory Committee, in Federal law with respect to product acquisition guidelines and high-performance

**2.1.5-Demonstration Project** The Federal Director and the Commercial Director are responsible for establishing guidelines to implement a demonstration project to contribute to the research goals of the OCHPGB and the OFHPGB. One demonstration project per year for each of fiscal years 2009 through 2014 must be conducted. The project will exhibit green features in a Federal building selected by the Federal Director in accordance with relevant agencies.

The demonstration project should provide for instrumentation, monitoring, and data collection related to the green features, for study of the impact of the features on overall energy use and operational costs, and for the evaluation of the information obtained through the conduct of projects and activities under this title.

The Federal facility chosen for the demonstration project should be an appropriate model for a project relating to:

1. The effectiveness of high-performance technologies;
2. Analysis of materials, components, systems, and emergency operations in the building, and the impact of those materials, components, and systems, including the impact on the health of building components;
3. Life-cycle costing and life-cycle assessment of building materials and systems; location and design that promote access to the Federal facility through walking, biking, and mass transit; and
4. The building should possess sufficient technological and organizational adaptability.

### **2.2-EISA Evaluation – Safety, Health/IAQ and IEQ Requirements (Matrix)**

(POC: David Marciniak (david.marciniak@gsa.gov, 202-538-9029).

David Marciniak described the content of his color-coded matrix showing the EISA area of responsibility, requirements, the EISA cite, the lead and coordinating offices at GSA, and the roles of the principal parties (Federal Director, Commercial Director and Advisory Committee. This information is available as an attachment on the CIAQ website along with these meeting minutes (as [EISA-IAQ-IEQ 12-FEB-08.pdf](#)).

### **3-NIOSH, National Institute of Occupational Safety and Health**

(POC: Dr. Ju-Hyeong, gzp8@cdc.gov, 304-285-5967)

NIOSH recently published three IEQ-related papers in January 2008:

3.1. Park J-H., Cox-Ganser J.M., Kreiss K., White S.K., Rao C.Y.  
Hydrophilic Fungi and Ergosterol Associated with Respiratory Illness in a Water-Damaged Building.  
Environ Health Perspect 2008; 116 (1): 45-50.  
[http://www.ncbi.nlm.nih.gov/pubmed/18197298?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/18197298?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

3.2. Sahakian, N.M., White S.K., Park, J-H., Cox-Ganser J.M., Kreiss K.  
Identification of Mold and Dampness-Associated Respiratory Morbidity in 2 Schools: Comparison of Questionnaire Survey Responses to National Data.  
J Sch Health 2008; 78 (1): 32-37.  
[http://www.ncbi.nlm.nih.gov/pubmed/18177298?ordinalpos=5&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/18177298?ordinalpos=5&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

3.3. McKernan L, Hein M, Wallingford K, Burge H, Herrick R.  
Assessing Total Fungal Concentrations on Commercial Passenger Aircraft Using Mixed-Effects Modeling.  
J Occ Env Hyg 2008; 5 (1):48-58.  
<http://www.ncbi.nlm.nih.gov/sites/entrez>

#### **4-EPA, Environmental Protection Agency**

(Visit <http://www.epa.gov/iaq/index.html> for IEQ/IAQ Information)

##### 4.1-RADON

##### 4.1.1-Contractor Report: Exploratory Study of Basement Moisture During Operation of ASD Radon Control Systems (December 2007)([www.epa.gov/radon/pubs/index.html](http://www.epa.gov/radon/pubs/index.html))

The Indoor Environments Division commissioned an *Exploratory Study of Basement Moisture During Operation of ASD Radon Control Systems*. The purpose of the study was to understand the potential moisture reduction benefits associated with residential radon control systems. The Agency believes that this information may be useful to industry associations, standard-setting organizations, government agencies and consumers. The study was funded by a cooperative agreement with Auburn University (Auburn, AL). Because its a contractor's report, its findings, conclusions and recommendations are those of its authors, not necessarily those of EPA. The principal investigator was Brad Turk, Environmental Building Sciences, Inc., Las Vegas, NM. (POC: Eugene Fisher, 202-343-9418, [Fisher.Eugene@epa.gov](mailto:Fisher.Eugene@epa.gov))

4.1.2-National Radon Action Month. January was National Radon Action Month. National Radon Action Month is intended to increase the public's awareness, testing, and mitigation of radon, and advance the use of radon-resistant new construction practices. Thus far over 753 radon outreach activities and events have been hosted by state programs, local organizations, and private companies nation-wide. EPA and the National Safety Council sponsored a Radon Awards & Recognition Ceremony on January 10 in Washington DC. Additional information is available at <http://www.epa.gov/radon/nram>. (POC: Gina Bowler, 202-343-9206, [Bowler.Gina@epa.gov](mailto:Bowler.Gina@epa.gov))

4.1.3-Region 6 Stakeholders Meeting. USEPA Region 6 hosted its first Radon Stakeholders Meeting on January 23-24, 2008 at the New Mexico Museum of Natural History (Albuquerque, NM). This informative workshop offered radon expert presentations from USEPA Headquarters, EPA Region 6, New Mexico Radon Program, Oklahoma Radon Program, TX Radon Program, and contacts from the various tribes in Region 6. This workshop was free to radon specialists, home inspectors, realtors, government or city officials, tribes and others interested in radon risk reduction. (POC: George Brozowski, EPA Region 6, 214-665-8541, [Brozowski.George@epa.gov](mailto:Brozowski.George@epa.gov))

##### 4.2-SCHOOLS

4.2.1-IAQ Tools for Schools (IAQ TFS) National Symposium. On December 6-8, 2007, EPA held its 8<sup>th</sup>

Annual *IAQ Tools for Schools (IAQ TFS)* National Symposium. Over 500 school representatives from across the nation attended this event in Washington, DC including superintendents, facilities managers, principals, teachers, nurses, health professionals, and students. The participants shared best practices for building and sustaining IAQ management programs in school districts. During this event EPA honored school districts for their achievements and innovative approaches to integrating IAQ issues into their curriculum and institutionalizing comprehensive IAQ management programs—3 schools received the National Excellence Award and 5 schools were recognized with the Model of Sustained Excellence Award. Since 2000, EPA has honored 91 school districts and 25 individuals for making outstanding progress in creating healthy learning environments for children.

(POC: Jennifer Lemon, 202-343-9608, Lemon.Jennifer@epa.gov)

4.2.2-HealthySEAT Version 2 Now Available. EPA's comprehensive Healthy School Environments Assessment Tool (HealthySEAT) has been updated with several new features and is available at: <http://www.epa.gov/schools/healthyseat>. HealthySEAT is a flexible software tool that integrates all Agency issues for schools which can be customized by school districts and used to track the status of facility conditions to help prevent environmental health problems before they arise. (POC: Bob Axelrad, 202-343-9315, axelrad.bob@epa.gov)

#### 4.3-ASTHMA

4.3.1-May is Asthma Awareness Month and May 6th is World Asthma Day. Join EPA in raising awareness and taking action to improve the quality of life for families dealing with asthma. Beginning in February, you can list your asthma event on the EPA Asthma Awareness Month Event locator map. At [www.epa.gov/asthma/awm.html](http://www.epa.gov/asthma/awm.html), are free education and outreach materials and an event planning kit.

#### 4.3.2-2008 National Asthma Forum: *Sharing, Learning, and Taking Action Together*

On May 1-2, 2008, asthma leaders from across the nation will gather in Washington, D.C., to discuss the most effective community-based strategies for managing asthma and achieving positive outcomes and results, including strategies to:

- *Develop* strong asthma program leaders
- *Create* close ties with the target community
- *Maximize* the benefits of community collaborations and partnerships
- *Provide* effective clinical care
- *Implement* environmental strategies that make an impact
- *Measure* program outcomes and *Accelerate* results
- *Build* a sustainable asthma management program

Researchers, policy makers and community leaders will engage around:

- *The five key drivers* of effective asthma programs
- *How model asthma management programs* create lasting success
- *The emerging business case for comprehensive asthma management*
- *The latest research*, including the recently revised NAEPP National Guidelines for the Diagnosis and Management of Asthma and the University of Michigan Asthma Health Outcomes Project

Representatives from health care plans, health care providers, state and local health and environmental departments, nonprofit organizations, Federal agencies, and others affiliated with community asthma programs are encouraged to attend. Take action to deliver high quality, comprehensive asthma care in your community! Register today for EPA's *Communities in Action for Asthma-Friendly Environments* National Forum at [www.epaasthmaforum.com](http://www.epaasthmaforum.com). Marketing materials, including a flyer and draft agenda are available. (POC: Kim Durkin, 202-343-9443, durkin.kim@epa.gov)

4.3.3-NIH National Asthma Education and Prevention Program (NAEPP) Guidelines. The NAEPP guidelines have significantly increased attention to environmental triggers and patient education. NIH released updated the Guidelines, which have a greater focus on achieving asthma control, providing

multi-faceted patient education, and environmental control measures. The Report is available at [www.nhlbi.nih.gov/guidelines/asthma/asthgdln.html](http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.html). (POC: Alisa Smith, 202-343-9372, smith.alisa@epa.gov)

4.3.4-National Environmental Leadership Award in Asthma Management. The Leadership Award goes to health plans and providers with exemplary asthma management programs for exceptional leadership in improving asthma by managing environmental triggers. Recipients the National Environmental Leadership Award are selected through a highly competitive process using established criteria. Application instructions, criteria, and links to past winner profiles may be found at [www.asthmaawards.info](http://www.asthmaawards.info). Winners will be honored at EPA's *Communities in Action for Asthma-Friendly Environments* National Asthma Forum (May 2008). Also, become a partner in building and maintaining the *Communities in Action for Asthma-Friendly Environments* Network by visiting [www.asthmacommunitynetwork.org](http://www.asthmacommunitynetwork.org). (POCs: Tracey Mitchell, 202-343-9446, Mitchell.Tracey@epa.gov, and Katrin Kral, 202-343-9454, Kral.Katrin@epa.gov)

4.3.5-Secondhand Smoke and Asthma Presentations at National Head Start Parent Conference. IED staff members presented a series of education sessions on secondhand smoke and childhood asthma at the National Head Start Association (NHSA) 24th Annual Parent Training Conference on December 14-18, 2007 in Indianapolis, IN. The EPA partnership with the HHS Office of Head Start aims to prevent health risks to a million enrolled Head Start children. The conference attracted nearly 2,000 Head Start staff, early care and education practitioners. (POCs: Mike Holloway, 202-343-9426, Holloway.Mike@epa.gov and Sheila Brown, 202-343-9439, Brown.Sheila@epa.gov)

#### 4.4-HOMES & LARGE BUILDINGS

4.4.1-Joint Effort to Improve IAQ in Buildings. EPA is collaborating with leading professional organizations to provide advanced indoor air quality (IAQ) design guidance for the building industry. Initiated through an EPA - funded cooperative agreement with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and formalized with a memorandum of understanding, this collaboration includes ASHRAE, EPA, the American Institute of Architects (AIA), the Building Owners and Managers Association (BOMA) International, the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), and the U.S. Green Building Council (USGBC). This collaboration includes the development of a book and a professional development course on an integrated process for achieving improved IAQ in all elements of a building which are expected to be available in 2009. (POC: Eric Werling, 202-343-9495, Werling.Eric@epa.gov)

4.4.2-ENERGY STAR Summit 2007. Eric Werling of IED gave a presentation on "ENERGY STAR IAQ" at the annual builder conference at the Denver Technical Center on December 3-4, 2007 (Denver, CO). About 500 participants attended the conference. The presentation highlighted the Indoor Air Package (IAP) and related business risk for builders. The IAP pilot program was launched in Denver in late 2005 ([www.energystar.gov/index.cfm?c=bldrs\\_lenders\\_raters.nh\\_iap](http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.nh_iap)). (POC: Eric Werling, 202-343-9495, Werling.Eric@epa.gov)

#### 4.5-PARTNERSHIP for CLEAN INDOOR AIR (PCIA) INTERNATIONAL

(POCs: Brenda Doroski (Doroski.Brenda@epa.gov, John Mitchell (Mitchell.John@epa.gov))

4.5.1-IAP and Household Energy Monitoring Workshop in South Africa: Brenda and John facilitated a PCIA regional workshop entitled "*Measuring Change: Indoor Air Pollution and Household Energy Monitoring*" on October 29 and November 2 in Pretoria, South Africa. Approximately 20 household energy and health experts from 11 African countries learned about monitoring capacity using different techniques including selecting a study design, calculating sample sizes, administering impact surveys, analyzing matter samples, and assessing the impact of household energy interventions.

4.5.2-LP Gas Forum in South Africa: Brenda attended the 20<sup>th</sup> "World LP Gas Forum" on October 24 in Cape Town, South Africa. She made a presentation on the benefits and challenges of transitioning from

solid fuels to LP gas in reducing indoor air pollution.

4.5.3-Cookstove Program Workshop and Exhibition in Nigeria: John participated in the “*Improved Wood Fuel Stove Workshop and Exhibition*” on November 5-6, 2007 in Abuja, Nigeria. Workshop participants included policy makers, manufacturers, distributors, retailers, and representatives from financial institutions and non-governmental organizations. The workshop’s purpose was to help build a household energy network across Nigeria and develop a sales plan for one million cook stoves.

#### **5-CPSC, Consumer Product Safety Commission**

CPSC’s work is ongoing for the CO generator and ozone-generating air cleaner projects. For the strong sensitizer project, the external review of the draft technical has been completed and a staff report on the external review is being prepared (from which it will proceed through agency clearance). (POC: Joanna M. Matheson; 301-504-7043; jmatheson@cpsc.gov)

**(C) Presentations.** Two presentations were given at the meeting. The first was given by Doug Read (ASHRAE) on the ASHRAE HQ building’s renewal. The second was given by Greg Brunner (EPA-IED) on ozone’s impacts in the indoor environment. These presentations will remain available on the CIAQ website for two weeks; after that please contact the presenter.

**1-Presentation on [ASHRAE Headquarters Building Renovation](#).** The renovated new ASHRAE HQ building will be a sustainable building designed with a focus on indoor environmental quality (IEQ), energy and water conservation. The building will also include other “green” aspects, including bike racks, ponds for water storage, and the future use of LED lighting. The building will be a heavily instrumented living lab. Goal is to achieve a net zero (or near net zero) energy use index without negatively affecting IEQ. Experience with the building will help develop the net zero 2015 design guidance. Optimization of the building’s systems will be ongoing, e.g., refinements could include building start based on temperature and dew point.

Presented by Doug Read, Program Director/Government Affairs, ASHRAE (dread@ashrae.org).

Doug also mentioned several **other activities related to sustainable buildings**:

(1) **Federal Buildings Workshop.** ASHRAE is participating in the development of a workshop on Carbon-Neutral Federal Buildings, which is being planned by the 2030 Coalition.. For details, see the attachment ([Federal Buildings Workshop DRead-ASHRAE](#)).

(2) **High-Performance Buildings Caucus of the U.S. Congress.** A draft proposal to establish a caucus is being circulated. For details see the attachment ([HP Buildings Caucus-DFT Scope.doc](#)).

(3) **High Performing Buildings magazine.** Doug reported that ASHRAE is publishing a new quarterly magazine on High Performing Buildings; for details visit <http://www.hpbmagazine.org/>. Interested CIAQ subscribers can enroll for a free subscription to the magazine on the website.

(4) **National Academy of Environmental Design.** It has been proposed that a new Academy within the National Academies system be established to capitalize on new knowledge regarding the design, construction, and maintenance of cities, landscapes, buildings and products. For details, see the attachment ([National Academies-NAEnvDesign-Proposal.pdf](#)).

(5) **Free Satellite Broadcast-Webcast.** The webcast “Integrated Building Design: Bringing the Pieces Together to Unleash the Power of Teamwork” will take place on Wednesday, April 16, 2008, 1-4 pm EDT. Information is available at <http://www.ashrae.org/education/page/557>.

**2-Presentation on [Ozone Impacts in the Indoor Environment](#).** 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 will present highlights from a growing body of literature on this topic, including several analyses recently completed by scientists at the Lawrence Berkeley National Laboratory (LBNL) with data from EPA's Building Assessment Survey and Evaluation (BASE) study of indoor air quality in office buildings. Presented by Gregory 'Greg' Brunner, EPA-IED (brunner.gregory@epa.gov, 202-343-9052).

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