

California Interagency Working Group on Indoor Air Quality

Agency Reports for 2008

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SPECIAL PRESENTATIONS

AGENCY REPORTS ON CURRENT IAQ ACTIVITIES

[American Lung Association of California](#)

[Bay Area Air Quality Management District](#)

[California Air Resources Board / IAQ & Personal Exposure Assessment Program](#)

[California Department of Education / School Facility and Planning Division](#)

[California Department of Public Health / Environmental Health Investigations Branch](#)

[California Department of Public Health / Indoor Air Quality Section](#)

[California Department of Public Health / Occupational Health Branch](#)

[California Department of Public Health / Radon Program](#)

[California Department of Public Health / Tobacco Control Program](#)

[California Department of Industrial Relations \(Cal/OSHA\)](#)

[California Energy Commission](#)

[California Integrated Waste Management Board / Sustainable Building Program](#)

[California Office of Environmental Health Hazard Assessment \(Indoor Air Risk Assessment\)](#)

[California Department of Toxic Substances Control \(Hazardous Materials Laboratory\)](#)

[Lawrence Berkeley National Laboratory / Indoor Environments Program](#)

[San Francisco Department of the Environment](#)

[Southern California Environmental Health Sciences/Children's Environmental Health Center](#)

[UC Berkeley Faculty](#)

[U.S. EPA Region IX / Indoor Environment Team](#)

[U.S. Federal Interagency Committee on IAQ](#)

FUTURE MEETINGS

SPECIAL PRESENTATIONS

March 12, 2008

Updating (and Re-thinking) California's Environmental Specifications for IAQ (Section 01350) and DHS Standard Practice for Testing of VOCs from Various Sources

Discussion led by Toni Stein, PhD, CDPH.

September 8, 2008

Brownbag discussion/recap of the *INDOOR AIR 2008 Conference* in Copenhagen.

See <http://www.indoorair2008.org/>

September 10, 2008

Special panel discussion on *California Green Building Codes* including Jane Taylor, California Building Standards Commission. See [CGBC summary](#).

Building Standards Commission Review – see “Green Building Code”

http://www.bsc.ca.gov/prpsd_chngs/ComReview07.htm

http://www.bsc.ca.gov/prpsd_chngs/pc_07_comment.htm

2008 Building Energy Efficiency Standards -- Rulemaking Proceeding

<http://www.energy.ca.gov/title24/2008standards/rulemaking/>

The Green Action Team

<http://www.green.ca.gov/GreenActionTeam/default.htm>

<http://www.energy.ca.gov/greenbuilding/ab2160/index.html>

December 18, 2008

Climate Change & Public Health Adaptation Strategies

Linda Rudolph, MD, MPH, Deputy Director, Center for Chronic Disease Prevention and Health Promotion, California Department of Public Health

Public Health Climate Change Adaptation Strategy Workgroup

<http://www.climatechange.ca.gov/adaptation/publichealth/index.html>

For past notes, click on “Meetings, Agendas, Documents, and Presentations”

[back to top](#)

AGENCY REPORTS ON CURRENT IAQ ACTIVITIES

American Lung Association of California

<http://www.californialung.org/>

– Bonnie Holmes-Gen (bhgen@alac.org)

Check their web site (above).

[back to top](#)

Bay Area Air Quality Management District

<http://www.baaqmd.gov/>

– Saffet Tanrikulu, STanrikulu@baaqmd.gov

Check their web site (above).

[back to top](#)

California Air Resources Board / Indoor Air Quality & Personal Exposure Assessment Program

<http://www.arb.ca.gov/research/indoor/indoor.htm>

– Peggy Jenkins (mjenkins@arb.ca.gov)

New Staff. Ms. Stephanie Parent joined the Indoor Exposure Assessment Section on June 16, 2008. Stephanie has a Master's degree in Environmental Science and Policy from Clark University, and a BS in Environmental Policy Analysis and Planning from UC Davis. She is working on several projects including updating some of ARB's indoor air quality fact sheets and guidelines, reviewing literature on indoor concentrations and sources of acrolein, and conducting outreach related to the air cleaner regulation. Contact: Stephanie Parent, sparent@arb.ca.gov

Presentations at the ISEE - ISEA JOINT Conference. ARB Research Division staff presented results from several in-house projects at the joint annual conference of the International Society for Environmental Epidemiology (ISEE) and the International Society of Exposure Analysis (ISEA), held in Pasadena in October. One presentation (by Tom Phillips) showed our current estimates of health and productivity impacts of indoor air pollution, updated from our estimates presented in the AB 1173 *Report to the Legislature on Indoor Air Pollution in California*. The current estimate of indoor air pollution costs in California is \$71 billion annually. Another presentation (by Peggy Jenkins) discussed formaldehyde concentrations in California residences. These concentrations have shown a downward trend over several decades but have decreased little over the past 10 years, leaving levels in homes well above health benchmark levels. A third presentation (by Ryan Johnson) discussed a recent study of VOC concentrations in 24 new California homes, garages, and vehicles; results showed that several of the homes exceeded California health benchmarks for cancer and/or developmental toxicity for at least one VOC. Finally, Dane Westerdahl

organized and conducted a half-day workshop on methods for fine and ultrafine PM measurement, which emphasized the importance of understanding the capabilities and limitations of standard instruments used for measuring PM.

Contact: Peggy Jenkins, mjenkins@arb.ca.gov, or any of those named above.

Regulation Paper Presented at INDOOR AIR 2008 in Copenhagen. At the 2008 conference of the *International Society of Indoor Air Quality and Climate*, Peggy Jenkins presented a paper on the necessity of regulation of some indoor sources to protect citizens from involuntary, high risk exposures indoors. The presentation reviewed the history of the perspective on regulation of indoor air, from the early days in which indoor air was viewed as a private good to recent years when indoor air has been recognized as a public good. In California, landmark regulations were recently adopted for two sources that provide examples of the situations for which regulation is a necessary, appropriate solution. In 2007, the California Air Resources Board (ARB) adopted two new regulations: formaldehyde emission limits for composite wood products, and a regulation limiting ozone emissions from indoor air cleaning devices used in occupied settings. The composite wood products regulation was necessary because an industry that had previously self-regulated its formaldehyde emissions was hampered from further self-regulation in part due to competition from foreign manufacturers who could produce similar, but higher formaldehyde, products at lower cost. Here, government regulation was needed to create a level playing field for all manufacturers. The indoor air cleaner regulation evolved from a different situation, where a faction of the industry remains in denial of the adverse health impacts of ozone, and continues to market their products through misleading advertising. Such actions leave government no choice but to adopt a clear regulation that prevents such abuse. These regulations will reduce the risk from two serious indoor air quality problems for Californians. Adoption of similar regulations at the national and international levels would provide more effective protection for all. Contact: Peggy Jenkins, mjenkins@arb.ca.gov.

Indoor Air Cleaner Regulation. This regulation, which limits ozone emissions from portable air cleaning devices and requires electrical safety testing, became final on October 18, 2008 (see <http://www.arb.ca.gov/regact/2007/iacd07/iacd07.htm>). Manufacturers, distributors, and retailers are required to be in full compliance with notification, testing, certification, labeling, and sales requirements by October 18, 2010. Underwriters Laboratory, Inc. (UL) and Air Quality Sciences (AQS) have joined together to provide testing services for Section 37 (the ozone emissions test) of UL Standard 867, and successfully completed ARB's audit process in late 2008. Intertek (ETL) is expected to have their test chamber ready in Spring, 2009. The certification application form and instructions have been made available on ARB's website at <http://www.arb.ca.gov/research/indoor/aircleaners/certification.htm>, and a set of Frequently Asked Questions has been posted at <http://www.arb.ca.gov/research/indoor/aircleaners/faq.pdf>. Contact: Peggy Jenkins mjenkins@arb.ca.gov

New Home Ventilation and Indoor Air Study. The New Home Study draft final report was reviewed and approved, with comments that need to be addressed, in March, 2008 by the Research Screening Committee (RSC) meeting. The final report is undergoing revision by

the Principal Investigator (PI), Bud Offermann, to address the RSC's comments. Delivery has been delayed, but a final report is expected to be available in late spring, 2009. The PI presented findings from the study at an ARB Chairman's Seminar and at a meeting of CEC staff (see slides at <http://www.arb.ca.gov/research/seminars/seminars.htm>). The key study results are that formaldehyde concentration levels are too high and air exchange rates (AER) are too low in new California homes. Results showed that 59% of the homes had 24-hour indoor formaldehyde levels above OEHHA's 8-hour Indoor Reference Exposure Level (REL) of 27 ppb for acute irritant effects. All of the homes had indoor formaldehyde levels that exceeded the Proposition 65 guidelines for cancer and developmental effects, and the chronic REL of 2 ppb. Indoor levels of acetaldehyde and a few VOCs also exceeded health-based guidelines. Based on tracer gas measurement results, two-thirds of the homes did not meet current ventilation guidelines. The CEC staff used the results of this study to help develop their new energy efficiency standard that requires mechanical ventilation in new homes (see below). Contact: Tom Phillips tphillip@arb.ca.gov

Composite Wood Formaldehyde Regulation. The composite wood product regulation, which established two phases of increasingly stringent formaldehyde emission limits for composite wood products (hardwood plywood, particleboard, and medium density fiberboard), became effective on April 18, 2008. The compliance date for most of the Phase I standards was January 1, 2009. Phase II compliance dates for the different types of composite wood materials vary from January 2010 to January 2012. Presently, over 250 mills have been certified to manufacture ARB compliant composite wood products worldwide. ARB staff continues to work with industry, test organizations, and others to finalize test methods, approve third party certifiers for mill certifications, promote the availability of ultra-low formaldehyde emitting products and to facilitate the availability of certified products. Contact: Jim Aguila, jaguila@arb.ca.gov For details on the regulation see <http://www.arb.ca.gov/regact/2007/compwood07/compwood07.htm>

Green Buildings. Staff met with the State Building Standards Commission (BSC) and Department of Housing and Community Development (HCD) staff regarding various drafts of the Green Building Standards Code (GBSC) and offered a number of measures for inclusion in the standards. Some measures were included in the new GBSC approved by BSC in July 2008, but others remain to be incorporated. ARB plans to work with BSC and HCD to refine and update the measures currently in the GBSC and to include new measures targeted toward reducing greenhouse gases. Indoor Program staff also have been actively involved in other green building programs, including the revisions to Build It Green's ratings related to indoor air quality in new single family homes, and the revisions to the CHPS criteria for school construction and renovation and for new portable and modular classrooms. Contact: Tom Phillips, tphillips@arb.ca.gov.

Comments on State Building Energy Efficiency Standards. Staff submitted comments on the draft 2008 Building Energy Efficiency Standards that were proposed by the California Energy Commission. These design standards represent a major change because they will require new homes to have an outdoor air supply via a whole house mechanical ventilation system. Several other states and nations have required this for some time. Recent studies funded by the ARB and the Commission, and some previous studies, confirmed that

mechanical ventilation is needed in new homes because so many of them have insufficient outdoor air exchange and very high formaldehyde levels. For the residential building standards, staff recommended improvements for the testing, inspection, and maintenance of mechanical ventilation systems, and for air filtration. Staff comments on the nonresidential building standards focused on the need to improve air filtration, ventilation control systems that use CO₂ sensors, and testing of ventilation systems. The approved standards will become effective in 2009. Contact: Tom Phillips tphillip@arb.ca.gov

In-Vehicle Study of New Cars. During summer, 2008, we conducted a pilot study of emissions from materials inside vehicles in a small number of new cars borrowed from ARB employees. This in-house study measured CO₂ (primary source is exhaled breath of vehicle occupants), volatile organic compounds (VOCs), and ozone. In several of the vehicles, CO₂ levels rapidly exceeded 5000 ppm, the Cal/OSHA Personal Exposure Limit (PEL), in 8 of 11 cars, after periods of driving with windows and vents closed. The maximum value measured was 8163 ppm. Levels rapidly decreased when a vent was again opened. While the levels measured do not pose a health risk from commutes of average duration, periodic opening of vents during longer drives may help prevent excessively high CO₂ levels and the possibility of drowsiness. VOC results are still undergoing analysis. In early 2009, semi-volatile compounds (SVOCs) such as phthalates and PBDEs (fire retardants) will be measured using wipes to sample from dashboards and the inside of windshields. Contact: Dane Westerdahl fwesterd@arb.ca.gov

Small and Medium Commercial Building Study. The survey and field study of IAQ and ventilation in small and medium commercial buildings (under 4 stories and less than 50,000 square feet) are both well underway by investigators from UC Berkeley, LBNL, and UC Davis. A wide array of measurements of ventilation, indoor air quality, and comfort factors will be obtained in 40 buildings. The data will be used to examine the relationships among indoor air quality, ventilation, and building characteristics. Results will be used by the Energy Commission to update their Title 24 energy efficiency standards in 2011, and by ARB to assess the need for source emission limits or other actions to reduce exposures to indoor contaminants. Contact: Ash Lashgari, klashgari@arb.ca.gov

Quantifying Pollutant Emissions from Office Equipment. Investigators from UC Berkeley and LBNL have completed measurements for a study of the relationship between energy consumption and emissions for PCs and printers. The investigators also are examining the primary temporal and operational factors that influence emissions from this equipment, and identify mitigation measures that operators can take to reduce emissions and exposures from PCs and printers. The slides from the Chairman's seminar presented by the PI, Dr. Tom McKone, in early January, 2009, are available at <http://www.arb.ca.gov/research/seminars/seminars.htm> and provide the preliminary results. The final report is expected to be available in summer, 2009. Contact: Ryan Johnson, rjohnson@arb.ca.gov

Revisions to EPA's Energy Star Program. Staff discussed EPA's revised Energy Star-IAQ Package program requirements with EPA's leadperson for the Program and relevant Region 9 staff, and submitted written comments to press for stronger IAQ Package requirements,

especially for low emitting building materials. The IAQ Package is a set of provisions that builders of Energy Star homes can use to assure healthier indoor air quality. EPA has conducted a few pilot programs for the IAQ Program, but the provisions remain more focused on eastern problems such as radon, and do not include, for example, ARB's recent limits on formaldehyde emissions from composite wood materials. We encouraged EPA to adapt the IAQ Package for California builders to better reflect California's (more protective) regulations and guidelines. We recommended that the IAQ Package require compliance with ARB's new Air Toxic Control Measure for Composite Wood Products, rather than just meeting ANSI and HUD standards, which are very weak. There are already materials on the market that meet ARB's new regulation, and more are expected to become available in the coming months. EPA also was urged to include a requirement for insulation materials with no added formaldehyde; there are products readily available that can meet all residential needs, and in California, they are marketed at little or no added cost for the home market. EPA made some changes in response to our comments, and has indicated that they will consider others in the future. Contact: Peggy Jenkins, mjenkins@arb.ca.gov.

Review of Federal Guidance Draft on Preventing Environmental Health Problems in Manufactured Homes, Schools and Offices. On October 17, 2008, ARB staff participated in a meeting convened by the Centers for Disease Control (CDC) in Washington, D.C. to discuss their preliminary draft document on "Keeping Safe and Healthy in Manufactured Structures." The purpose of the document is to provide non-regulatory guidance to occupants who live, work, study and play in manufactured buildings, as well as to industry organizations, health and environmental professionals, government agencies, and others involved in the design, manufacture, purchase, installation, regulation, operation and maintenance of manufactured buildings. CDC's purpose in convening the meeting was to obtain input from experts and key stakeholders on an early draft of their guidance document. The impetus for the meeting was the problems experienced with manufactured trailers and homes used for Hurricane Katrina victims, including elevated formaldehyde levels, mold issues, pest issues, inadequate ventilation, and others. CDC plans to revise the document based on the comments and information received, and release the revised version early next spring for public review. Contact: Peggy Jenkins, mjenkins@arb.ca.gov

Health Canada Moving Forward on Indoor Air. Indoor Exposure Assessment Section staff met with staff of Health Canada's Water, Air and Climate Change Bureau via conference call at Health Canada's request to share information on our respective indoor air quality programs. Health Canada is launching a 4-year program to assess the risks posed to Canadians by indoor air contaminants. They plan to identify a priority list of substances for which assessments will be conducted and guidelines and regulations developed. Accordingly, the Canadians were especially interested in our authority over indoor air and how we fund our activities. They also are engaged in a number of indoor air quality studies, some of which may provide very useful information for ARB as well (see <http://www.hc-sc.gc.ca/ewh-semt/air/in/index-eng.php>). Both parties learned much from the exchange, and we agreed to talk again every six months or so. Contact: Peggy Jenkins, mjenkins@arb.ca.gov

Scientific Review Panel Approves Noncancer RELs. At their December 5, 2008 meeting, the Scientific Review Panel approved OEHHA's recommendations for proposed Reference Exposure Levels (RELs) for acetaldehyde, acrolein, arsenic, formaldehyde, manganese, and mercury. The RELs provide health protective guidance levels for acute, 8-hour, and chronic exposures to chemicals that have non-cancer health impacts. Reference exposure levels are concentrations of a chemical at or below which adverse non-cancer health effects are not anticipated to occur for a specified exposure duration. Although developed for the purpose of meeting outdoor Air Toxics Hot Spots Program needs, OEHHA's RELs provide good guidance for health-protective indoor concentrations of air pollutants in non-occupational indoor settings for the stated exposure times. Contact: Jim Behrmann, jbehrman@arb.ca.gov. For more information on the SRPs actions, see <http://www.arb.ca.gov/srp/srpmeetings.htm>. For information on the new RELS, see <http://www.oehha.ca.gov/air/allrels.html>.

Wildfire Smoke Guide

Staff assisted with updating a guide to help local officials cope with smoke from wildfires. Various ARB staff worked with staff from the Department of Public Health, the lead agency, as well as Cal/OSHA and other agencies. A major improvement to the guideline included a policy regarding the operation and management of ventilation systems in commercial and public buildings to protect workers during periods of especially high PM levels. Other noteworthy additions include an extended section on respiratory masks (e.g., N95s, P100s), improved discussion of home air cleaning options, and sample public advisories from local communities. For further information see the revised guideline and Appendix A at <http://www.arb.ca.gov/smp/progdev/pubeduc/wfgv8.pdf>. Contacts: Tom Phillips, tphillips@arb.ca.gov

[back to top](#)

California Department of Education / School Facility and Planning Division

<http://www.cde.ca.gov/ls/fa/>

– Michael O'Neil (MOneill@cde.ca.gov)

Check their web site (above).

[back to top](#)

California Department of Public Health / Environmental Health Investigations Branch

<http://www.cdph.ca.gov/ehib/>

<http://www.californiabreathing.org>.

– Janet Tobacman, Janet.Tobacman@cdph.ca.gov

New Asthma Report and Strategic Plan. The [Strategic Plan for Asthma in California, 2008–2012](#) (SPAC) was released in April 2008. Five major Goals are identified in the SPAC: *Implementation, Monitoring and Evaluation; Surveillance and Research; Health Care; Indoor Environments*, and; *Outdoor Environments*. Recommendations in the Plan are

intended to mobilize individuals, organizations, communities, and state and local agencies to collectively take clearly defined, comprehensive, and coordinated action on asthma over the next five years. To learn more about asthma in California, see [The Burden of Asthma in California: A Surveillance Report](#).

California Breathing (CB) Grants and Awards

CB completed its **2007-2008 Mini-Grants Program** to address asthma disparities, with several grantees working on IAQ issues:

- *San Francisco Dept. of Environment* - Analysis of asthmagens in cleaning products found in stores near a housing development in Bayview Hunters Point area. Trained community health workers to interview residents, provide alternative cleaning products, and then conducted another interview to evaluate changes.
- *EarthTeam* - Reached over 500 students in Richmond and Oakland with the curriculum “Something’s in the Air”
- *INMED/Mothernet* – Conducted home assessments as part of case management for 25 African American children in Los Angeles

(NEW!) In 2008, CB also initiated a second grant program, **Strategic Plan Implementation Grants (SPIG)**, with higher funding amounts, aimed at a broader audience and intended to further implementation of the CA Strategic Plan for Asthma in California. Focus areas for 2008-2009 include housing, outdoor environments and community engagement in local planning and policy. In the 2008-2009 funding cycle three grant projects are focused on IAQ issues in homes:

- *Californians for Pesticide Reform* – Working with partner organization Physicians for Social Responsibility/LA on implementation of Integrated Pest Management strategies in MUH. Using a combination of tenant education, organizing negotiation with managers of non-profit housing developments.
- *Sonoma County Asthma Coalition* – Multi-pronged approach to address mold and moisture intrusion through code enforcement strategies, especially with regard to home-based problems. Using existing relationships with building departments and others in the county the Coalition is conducting trainings and enhancing web-based information for code enforcers on healthy homes principles and strategies for dealing with mold in homes.
- *Shasta County Tobacco Control Program* – Working with senior mobile home parks to implement SHS policies

(NEW!) California Breathing has launched a new recognition program called **AIR Health (Achievements in Respiratory Health)**, that is being piloted in San Francisco Bay Area elementary schools. The AIR Health Awards recognize schools that are working to create healthy environments for children and school personnel and challenge schools that have not yet addressed key environmental issues to get started. Schools that qualify must meet a list of criteria that are focused on reducing common air pollutants and other contaminants that exist in the school environment, both inside buildings and in adjacent outdoor spaces. By addressing these criteria, schools create a healthier atmosphere for learning, not just for staff and students with asthma, but for everyone at the school site. Based on the number of

criteria achieved, schools will receive both an plaque and a monetary stipend. After evaluation of the pilot, we hope to broaden eligibility to schools statewide.

Healthy Homes & Schools.

- CB staff hosted an *Essentials for Healthy Homes Practitioners Course* in Richmond on May 20-21. The two-day training was co-sponsored with the CLPPB and LA County Environmental Health's Healthy Homes Program (DPH). Curriculum developed by Natl. Center for Healthy Housing. 40 participants included code enforcers, health workers, environmental health specialists, housing advocates.
- CB has also convened two meetings of an *Intra-Divisional DEODC Work Group* on healthy housing, which includes representatives from IAQ (Environmental Health Labs), California Breathing Asthma Program (Env. Health Investigations Branch), Childhood Lead Poisoning Prevention Branch (CLPPB), Occ Health (OHB) and the Environmental Exposures Section (EHIB.) The group is looking into possible collaboration on healthy homes issues.
- CB staff provided a presentation on Healthy Homes and Asthma at Cal Environmental Health Association symposium in March 2008 and APHA in Oct 2008.
- CDPH's Tobacco Control Program put on a 3-day conference on Second-Hand Smoke in December. Half the conference was devoted entirely to SHS and Multi-Unit Housing. (Cal Breathing was on planning committee)
- With the SF Asthma Task Force, and the Green Purchasing Institute, CB held a kick-off meeting in SF on developing a pilot project to promote less toxic products and safer cleaning practices in childcare centers.

[back to top](#)

California Department of Public Health / Indoor Air Quality Section

<http://www.cal-iaq.org/>

– Jed Waldman (Jed.Waldman@cdph.ca.gov)

Staff changes.

- **Toni Stein** is now working at the Department of General Service Sustainability Program as a Senior Procurement Engineer. Her new email is Antoinette.Stein@dgs.ca.gov
- **Mark Mendell** will be joining our group in a split position: he will be 50% at CDPH and 50% at Lawrence Berkeley National Laboratory. Mark is an environmental epidemiologist who has led a range of important studies on the health effects of indoor air and environmental conditions. His LBNL email is mjmendell@lbl.gov

Composite Wood. California Air Resource Board (CARB) funded CDPH-IAQ under an Interagency Agreement for technical assistance in development and evaluation of methods to be used in the enforcement of their Composite Wood Airborne Toxic Control Measure (ATCM 93120) regulation. The project includes several sub-tasks which continue through June 2009 (and possible longer). The project tasks include:

Evaluation of a field protocol for formaldehyde emission testing of composite wood. To facilitate the enforcement of this regulation, CDPH-IAQ staff developed a field protocol for use of the Field and Laboratory Emission Cell (FLEC) emissions chamber and a real-time formaldehyde monitor (INTERSCAN 4000 formaldehyde analyzer). The performance of the field set was evaluated for its precision and correlation with ASTM (D 6007) and ISO (16000-10) small chamber test methods over a range in temperature and relative humidity. Sampling conditions, e.g., sampling air flow rate and equilibration time and the wood product properties were examined for their effects on the performance of the field set. We compared the averaged response of the INTERSCAN monitor to time-integrated cartridge (DNPH) measurements. In the formaldehyde range of 50~300 $\mu\text{g}/\text{m}^3$, measurements of these two methods correlated well ($r^2 \sim 0.97$) with a 10% bias (Interscan lower than DNPH) in this concentration range. We also found that sampling from small chamber was equivalent to that of FLEC method, although the FLEC/INTERSCAN underestimated formaldehyde levels compared to the small chamber/DNPH set.

Establishment of equivalence between large and small chamber tests. CDPH-IAQ staff conducted large chamber and small chamber emission tests on composite wood samples provide by ARB staff. The wood samples included panels made of industrial hardwood plywood (HWPW), industrial particleboard (PB), and medium density fiberboard (MDF). ARB staff cut the panels into 4'x4' and 5"x5" pieces and developed them to the CDPH Lab prior to each test. Emission tests were conducted in CDPH's large and small chambers, following ASTM E 1333 and D 6007 methods, respectively. For small chamber tests, the ATCM 93120 requires testing nine specimens per sample in groups of three pieces per chamber. Parallel small chamber tests were conducted in the ARB test facility. Formaldehyde concentrations were determined using DNPH cartridges and HPLC-UV analysis, and corrected for temperature and relative humidity per ASTM methods. In each large chamber test, duplicate DNPH samples were collected. Sample concentrations fell into the three different ranges defined under ATCM (as measured by the large chamber method).

Comparison of laminated board to raw board emissions is the next task that is beginning in early 2009.

More to follow...

[back to top](#)

California Department of Public Health / Occupational Health Branch

<http://www.cdph.ca.gov/ohb/>

– Liz Katz (Ekatz@dhs.ca.gov)

Report Supports Improved Workplace Standard Setting for Cancer and Reproductive Hazards. Many California environmental regulations are based on scientific “risk assessments” performed by the Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA). OHB commissioned OEHHA to assess the feasibility of using the same scientific methods to develop recommendations for health-protective exposure limits in the workplace. The project focused on evaluating chemicals known to cause cancer or reproductive harm

(i.e., chemicals on California’s “Proposition 65” list). The report shows that health-protective exposure limits for workers can be calculated based on existing OEHHA risk assessments. This information will assist OHB in recommending priorities for Cal/OSHA rulemaking and promoting an improved methodology for health-based PELs. The report’s Executive Summary is available on-line at:

www.cdph.ca.gov/programs/hesis/Documents/risksummary.pdf

and the complete report is at : www.cdph.ca.gov/programs/hesis/Documents/riskreport.pdf

For more information on OHB’s work in this area, see

www.cdph.ca.gov/programs/hesis/Pages/Standards.aspx.

Understanding Toxic Substances (Nov 2008 edition) now available. This popular booklet from HESIS is an introductory guide to the terminology and concepts needed to discuss toxic chemicals. Rich in examples drawn from workplace settings, the 38-page guide is useful as a classroom text and reference. Topics include: the physical forms of materials; the ways chemicals can be absorbed by the body; acute vs. chronic exposures; chemical exposure limits; locating further information about chemicals; reducing worker exposures; and using Material Safety Data Sheets. The booklet can be downloaded at:

www.cdph.ca.gov/programs/hesis/Documents/introtoxsubstances.pdf

or by requesting copies at (866) 627-1586.

California Safe Cosmetics Program Releases Chemical Lists. The California Safe Cosmetics Act of 2005 requires cosmetics companies to report products that contain chemicals known or suspected to cause cancer, birth defects, or reproductive harm. This information will be reported to the California Department of Public Health. To assist companies with reporting, the California Safe Cosmetics Program in the California Department of Public Health has compiled a list of these chemicals using reports and lists from authoritative bodies. The list is now available online in English, Spanish and Vietnamese. The cosmetics online ingredients database system is under development. Please note: the system is not yet ready for manufacturers to submit chemical information. For more information, visit www.cdph.ca.gov/programs/cosmetics.

Asthma Update: OHB Activities and Publications.

- *Revised Consensus Standard for Safer Cleaning Products.* OHB’s Work-Related Asthma Prevention Program submitted comments and vote on revision of GS-37, the Green Seal standard on institutional cleaners. CDPH’s Indoor Air Quality section was also involved. This new version of GS-37 has stronger health and environmental protections including a prohibition of ingredients known to cause allergic-type asthma, strengthened toxicity and corrosivity limits, tighter limits on ingredients that can cause indoor air pollution, and strengthened limits on chemicals that can be absorbed through the skin. Employers should purchase products using guidelines such as GS-37. See information posted at www.cdph.ca.gov/programs/ohsep/Documents/GS-37.pdf
- OHB shared occupational asthma data in discussions with stakeholders for *Green Cleaning for Childcare* and in the National Disinfectants Work Group.
- *Work-Related Asthma in the Educational Services Industry: California, Massachusetts, Michigan, and New Jersey, 1993 – 2000.* American Journal of Industrial Medicine 2008

Jan;51(1):47-59. Mazurek JM, Filios M, Willis R, Rosenman KD, Reilly MJ, McGreevy K, Schill DP, Valiante D, Pechter E, Davis L, Flattery J, Harrison R.

- *Primary prevention of occupational asthma: identifying and controlling exposures to asthma-causing agents.* American Journal of Industrial Medicine 2008 May 5;51(7):477-491. Quint J, Beckett WS, Campleman SL, Sutton P, Prudhomme J, Flattery J, Harrison R, Cowan B, Kreutzer R.
- *Strategic Plan for Asthma in California 2008-2012.* See Goal 4, Section D, which addresses asthma in the workplace.
www.californiabreathing.org/images/stories/publications/asthmastrategicplan.5-5-08.pdf
- *The Burden of Asthma in California: A Surveillance Report.* Chapter 6 includes work-related asthma. www.ehib.org/papers/asthmaburdenreport.pdf

OHB Environmental Initiative. OHB is increasing its activities that promote safer chemicals policies, including eliminating or reducing the use of toxic chemicals that are harmful to workers, the general public, and the environment. Some current topic areas are reducing toxic pesticide use and identifying safer cleaning practices. These efforts may also include new or improved chemical regulation policies, ensuring that “green chemistry” approaches do not adversely affect workers, and partnering with environmental agencies and organizations that share similar concerns.

[back to top](#)

California Department of Public Health / Radon Program

<http://www.cdph.ca.gov/radon/>

– George Faggella (George.Faggella@cdph.ca.gov)

Radon Potential Maps. Maps for Monterey and San Luis Obispo Counties have been released this year and are available on California Geological Survey webpage via links on Indoor Radon webpage www.cdph.ca.gov/healthinfo/environhealth/Pages/Radon.aspx. (click on *Radon in California* link).

Radon Resistant Construction.

- Presentations were made to LEED for Homes (green building program) on Radon Resistant New Construction, Engineering Geologists, and high school students and Realty Associations.
- We participated in the development of the new State Green Building Standards and was unsuccessful in getting RRNC incorporated into the new standards.

Outreach

- Responded to approximately 150 phone calls and 150 emails relating to radon and granite as a result of the national news articles about the topic.
- Distributed approximately 700 test kits through our discount (\$5.00) test kit program.
- Conducted Indoor radon screening in Amador, Calaveras, Tuolumne Counties and San Fernando Valley area and Palos Verdes Peninsula. Sent approximately 50,000

recruitment/information letters to homeowners of the respective areas and have mailed approximately 3711 test kits. So far 678 have been analyzed.

- Partnered with EarthTeam (an environmental education network) to conduct a statewide video PSA contest for High School students.
- The Indoor Radon Program webpage has been averaging approximately 40 hits per day.
- Donated test kits to the Esperanza Center for their Health Homes program.
- Donated test kits to One Breath Away from the Cure Lung Cancer foundation.

[back to top](#)

California Department of Public Health / Tobacco Control Program

<http://www.cdph.ca.gov/programs/Tobacco/>

– Christine Richter (christie.richter@cdph.ca.gov)

Name Change. The Tobacco Control Section has begun to take steps to become a Branch in the California Department of Public Health. One of the first steps is a name change; we are now called the *California Tobacco Control Program* (CTCP).

Secondhand Smoke in Cars. CTCP was awarded a NPHIC Gold Award (National Public Health Information Council) for its Smoke-free Cars with Minors Law implementation educational campaign. To see portions of the award winning campaign go to www.tobaccofreeCA.com and click on 'smoke-free cars'.

Smoke-Free California: Celebrating our Success and Envisioning our Future. The CTCP Secondhand Smoke (SHS) and Multi-Unit Housing (MUH) Workgroups collaborated this year to host a statewide conference that addressed limiting exposure to SHS throughout California. The December conference was a huge success with over 230 attendees, including some of our national partners. Many participants stated that this was "one of the best conferences they had ever attended". The conference link is:

<http://www.cce.csus.edu/conferences/cdph/smokeFreeCA08/index.htm>

Secondhand Smoke Workgroup. The workgroup continues to meet bi-monthly to assist in the development and implementation of strategies to increase the number of voluntary and legislative policies that eliminate exposure to SHS. In 2008, the workgroup developed various educational materials that addressed SHS messaging as well as held quarterly Technical Assistance calls to assist the field in their efforts. The majority of 2008 was spent planning the statewide conference as well as providing technical assistance to the California Air Resources Board as they gathered information for their soon to be released report *Environmental Tobacco Smoke Risk Reduction Plan*.

Multi-Unit Housing Workgroup. This workgroup continues to meet monthly to assist in the development and implementation of strategies to increase the number of voluntary and legislative policies related to smoke-free multi-unit housing in California. Activities include planning and conducting quarterly technical assistance calls to TCP-funded agencies, planning the statewide conference and developing a soon-to-be-released toolkit to assist the field to creating smoke-free multi-unit housing.

Tribal Casinos/Workplaces. CTCP-funded agencies provided technical assistance to the National Conference of Legislators from Gaming States as they drafted and adopted a smoke-free gaming resolution. The NCLGS resolution encourages lawmakers to include casinos and other gaming venues in smoke-free workplace laws. In addition, it recommends that smoke-free air be included in state-tribal gaming compact agreement. The resolution is on-line at <http://www.nclgs.org/PDFs/8000827h.pdf>.

Secondhand Smoke Research. CTCP-funded agencies have begun to work with the WinRiver Casino, in Redding, CA., and Dr. Neil Klepeis, from Stanford University, to do pre- and post-smoke-free casino policy air quality measurements. The WinRiver Casino is slated to go completely smoke-free by June of 2009.

[back to top](#)

California Department of Industrial Relations (Cal/OSHA)

<http://www.dir.ca.gov/dosh/>

– Bob Nakamura (bnakamura@hq.dir.ca.gov)

Wildfire Information. During the unprecedented wildfires that occurred in 2008, Cal/OSHA issued a guidance document about protection of employees working indoors from the windborne smoke in terms of advisable approaches to modifying HVAC systems to cope with the problem. The document discusses the problems posed by turning off HVAC systems or attempting to operate them in a full recirculation mode, and other issues that can be important in these situations.

http://www.dir.ca.gov/DOSH/Smoke_Guide_for_HVAC_operation_7-21-08_dist.pdf

Indoor Air/Energy Code Review. The Division was involved in reviewing the proposals for the 2008 California Building Energy Efficiency Standards (Energy Code). Division personnel identified several concerns that were conveyed to the California Energy Commission. Contact: Jeff Ferrell at 916-574-2995, Deborah Gold at 510-286-7006 and Bob Nakamura at 510-286-7005.

Heat Illness Prevention in Indoor Workplaces. The Division has produced a guidance document for some indoor environments where heat illness can be a problem. This can be found at <http://www.dir.ca.gov/dosh/etools/08-006/P08-00602.pdf>. Contact: Amalia Neidhardt at 916-574-2993.

Permissible Exposure Limit Revision Process. The Division has convened a number of Health Expert Advisory Committee meetings to assess the need for adopting Threshold Limit Values recently issued by the American Conference of Governmental Industrial Hygienists for specific substances. The next meeting has been scheduled for March 25, 2009 at 930 AM at the Elihu Harris State Building 1515 Clay Street, Room 1304 Oakland. Some substances have recently been noticed for possible PEL setting by the Standards Board, documentation for this can be found at: http://www.dir.ca.gov/OSHSB/airborne_contaminants09.html

A complete list of current activities relating to specific substances can be found at

http://www.dir.ca.gov/dosh/DoshReg/5155Meetings_2009.htm

Contacts: Bob Barish at 510-286-7001 and Steve Smith at 916-574-2996.

Aerosol Transmissible Diseases. The Division is in the process of formal rulemaking for an Aerosol Transmissible Disease Standard. The proposal also addresses zoonotic diseases. The first proposal was noticed the comment period ended on August 21, 2008 at the Standards Board hearing. Division staff are in the process of modifying the proposal in response to comments, and this revision will be noticed by the Standards Board this spring. The Board documentation for the proposed standards can be found at

<http://www.dir.ca.gov/oshsb/proposedregulations.html>

Contacts: Deborah Gold at 510-286-7006 and Bob Nakamura at 510-286-7005.

Information about proposed CalOSHA standards can be accessed at

http://www.dir.ca.gov/dosh/DoshReg/advisory_committee.html

[back to top](#)

California Energy Commission

<http://www.energy.ca.gov/research/buildings/index.html>

– Obed Odoemelam (Oodoemel@energy.state.ca.us)

The California Energy Commission is required to develop cost-effective building energy efficiency standards that include both mandatory and performance requirements. The Commission's Building Energy Efficiency Standards are specified in the California Code of Regulations (CCR), Title 24, Part 6 (also known as the California Energy Code). These standards are required to be revised periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. One of the most important aspects of the Commission's building energy efficiency standards involves specific ventilation to ensure energy efficiency while maintaining healthy indoor air quality and thermal comfort. The Commission modified the ventilation requirements in its 2008 revisions of the standards through a process that allows for input from the industry, the general public, governmental agencies and specific stakeholders. These revisions were adopted on April 23, 2008 and will become effective on July 1, 2009.

The Commission supported and continues to support and sponsor research or investigations on ventilation system effectiveness, demand-controlled ventilation, and effectiveness of building envelopes, indoor lighting, ventilation rate measurement and adequacy, air filtration, spot exhaust systems, pollutant level measurements, activity-specific indoor pollution, and building related health and comfort impacts. These research or investigative activities are funded mainly through the Commission's Building End-Use Energy Efficiency Program and the Public Interest Energy Research (PIER) Program.

[back to top](#)

California Integrated Waste Management Board / Sustainable Building Program

<http://www.ciwmb.ca.gov/GreenBuilding>

<http://www.ciwmb.ca.gov/GreenBuilding>

– Kathy Frevert (KFrevert@CIWMB.ca.gov)

[back to top](#)

California Department of Toxics Substances Control / Environmental Chemistry Laboratory

– Myrto Petreas (Mpetreas@dtsc.ca.gov)

[back to top](#)

Office of Environmental Health Hazard Assessment / Indoor Air Risk Assessment Group

<http://www.oehha.ca.gov/air.html>

– Richard Lam (RLam@oehha.ca.gov)

Reference Exposure Levels

California Environmental Contaminant Biomonitoring Program.

Health Criteria for School Site Risk Assessment for Chlorpyrifos.

Green Chemistry at OEHHA.

Unit Risk Value For Ethylbenzene.

American Academy of Pediatrics National Conference & Exhibition.

[back to top](#)

Lawrence Berkeley National Laboratory / Indoor Environments Department

<http://eetd.lbl.gov/ied/>

– Mike Apte (MGAPte@lbl.gov)

[back to top](#)

San Francisco Department of the Environment

<http://www.sfenvironment.org>

[back to top](#)

Southern California Environmental Health Sciences and Children's Environmental Health Center (University of Southern California & UCLA)

– Adrea Hricko (scehsc@usc.edu)

Check their web sites (below):

<http://hydra.usc.edu/scehsc/default.asp>

http://www.usc.edu/schools/medicine/departments/preventive_medicine/divisions/occupational/occ_environmental/scehsc/

[back to top](#)

UC Berkeley Faculty

Professor William Nazaroff see www.ce.berkeley.edu/~nazaroff

Journal articles and editorials.

- Nazaroff WW, Inhalation intake fraction of pollutants from episodic indoor emissions, *Building and Environment* 43, 267-277, 2008.
- Coleman BK, Destailats H, Hodgson AT, Nazaroff WW, Ozone consumption and volatile byproduct formation from surface reactions with aircraft cabin materials and clothing fabrics, *Atmospheric Environment* 42, 642-654, 2008.
- Bhangar S, Cowlin SC, Singer BC, Sextro RG, Nazaroff WW, Ozone levels in passenger cabins of commercial aircraft on North American and transoceanic routes, *Environmental Science & Technology* 42, 3938-3943, 2008.
- Chan WR, Nazaroff WW, Price PN, Gadgil AJ, Effectiveness of urban shelter-in-place. III. Commercial districts, *Building Simulation* 1, 144-157, 2008.
- Shehabi A, Horvath A, Tschudi W, Gadgil AJ, Nazaroff WW, Particle concentrations in data centers, *Atmospheric Environment* 42, 5978-5990, 2008.
- Coleman BK, Lunden MM, Destailats H, Nazaroff WW, Secondary organic aerosol from ozone-initiated reactions with terpene-rich household products, *Atmospheric Environment* 42, 8234-8245, 2008.
- Weschler CJ, Nazaroff WW, Semivolatile organic compounds in indoor environments, *Atmospheric Environment* 42, 9018-9040, 2008.
- Nazaroff WW, Climate change, building energy use, and indoor environmental quality, *Indoor Air* 18, 259-260, 2008.
- Nazaroff WW, New directions: It's time to put the human receptor into air pollution control policy, *Atmospheric Environment* 42, 6565-6566, 2008.

New PhD and Student Prizes

- *Priya Sreedharan*. Dissertation title: Bayesian based design of real-time sensor systems for high-risk indoor contaminants.
- *Beverly Coleman* and *Seema Bhangar* were co-recipients of the inaugural Joan M. Daisey Indoor Air Quality Research Award granted by UC Berkeley's Department of Civil and Environmental Engineering.

- *Beverly Coleman* won first prize for Student Achievement from the International Society of Indoor Air Quality and Climate (ISIAQ), awarded at Indoor Air 2008 in Copenhagen.

Professor Kirk Smith See <http://ehs.sph.berkeley.edu/krsmith/>

Highlighted Publications

- Comparative Environmental Health Assessments: A brief introduction and application in China, *Annals of the NY Academy of Sciences* 1140: 31-39, 2008
- Low-cost temperature loggers as stove use monitors (SUMs), *Boiling Point*, 55:16-19, 2008.
- WHO Air Quality Guidelines: Moving indoors, *Air Quality, Atmosphere, and Health*, 1:17-18, 2008.
- Self-rated health among Mayan women participating in a randomized intervention trial reducing indoor air pollution in Guatemala, *BMC International Health and Human Rights*, 8-7, 2008.
- Symposium on Climate Change and Health in the Annual Review of Public Health, 2008. Read the guest editorial by KR Smith "Mitigation, Adaptation, and Suffering: How Much of Each?" and his article with E. Haigler on "Co-benefits of Climate Mitigation and Health Protection in Energy Systems: Scoping Methods". The other four articles are available here.
- Wood, the Fuel that Warms You Thrice, *Human Health and Forests: A Global Overview of Issues, Practice, and Policy*, 2008.
- Indoor air pollution from unprocessed solid fuel use and pneumonia risk in children aged under 5 years: A systematic review and meta-analysis, *Bulletin of the WHO*, 2008.
- "Ambient Temperature Predicts Sex Ratios and Male Longevity" *Proceedings of the National Academy of Sciences*, 2008.
- "Climate Change and Global Health: Quantifying a Growing Ethical Crisis" *EcoHealth*, 2007.
- "Human Health", Ch 8, Intergovernmental Panel on Climate Change, 4th Assessment Report, WGII, Impacts, Adaptation, and Vulnerability 2007

[back to top](#)

U.S. EPA Region IX / Indoor Environment Team

<http://www.epa.gov/iaq/>

- Barbara Spark (spark.barbara@epamail.epa.gov)
- Shelly Rosenblum (rosenblum.shelly@epa.gov)
- Katie Stewart (stewart.kathleen@epa.gov)

Region 9 Personnel Change. Radon Coordinator, **Louise Hill**, retired in May, 2008. **Kathleen (Katie) Stewart**, formerly in the Air Division's Permits Office, was hired for the new position of Indoor Air Risk Coordinator. Katie coordinates indoor air risk issues and provides technical support on indoor air issues for our community-based risk reduction projects. She also works in the indoor air quality, radon, asthma, and Tools for Schools programs as a grants project officer.

NEW/PENDING NATIONAL RESOURCES

Formaldehyde Emissions from Pressed Wood Products: Updates on the EPA Advance Notice of Proposed Rulemaking (ANPR) and notice of public meetings can be found at: <http://www.epa.gov/opptintr/chemtest/formaldehyde/index.htm>

New CO fact sheet: EPA has released a new fact sheet: Preventing Carbon Monoxide Poisoning: Information for Older Adults and Their Caregivers
http://www.epa.gov/aging/resources/factsheets/pcmp/pcmp_english_100-F-09-001.pdf
This supplements the CO information at on the IED page: <http://www.epa.gov/iaq/co.html>

IAQ Tools for Schools Connector: EPA will soon announce a "school and community-driven" Listserve to provide a forum for nation-wide interactivity on IAQ between school stakeholders. This will be part of the "IAQ Connector," a consolidated source for school IAQ updates, Webinars, and new resources. Check the website in early February 2009 for a full announcement. To subscribe, send an e-mail to IAQTfSConnector@cadmusgroup.com, and include the following in the subject line: "Subscribe to EPA's IAQ TfS Updates."

HealthySEAT (School Environmental Assessment Tool): Past webinars/trainings on HealthSEAT Version 2 can be downloaded at
<http://www.epa.gov/schools/healthyseat/webconferences.html>

"Tools for Techs:" The University of Connecticut Health Center's Occupational and Environmental Health Center has developed a supplement to the IAQ Tools for Schools checklists called "Tools for Techs." These checklists were designed to address the unique IAQ issues found in technical high schools and the traditional high schools that teach technologies. They are still in draft form, and UCONN welcomes feedback from school districts which use them. http://www.oehc.uhc.edu/CIEH_TfT.asp

Communities in Action for Asthma Friendly Environments (CAAFE): 374 organizations have signed up for this EPA-sponsored network, of which 47 are in California. CAAFE now houses the Asthma Resource Databank previously housed at "Allies Against Asthma." The website features "The Change Package," the System for Delivering High-Quality Asthma Care, that drives successful asthma program design, delivery, outcomes, and longevity. See - <http://asthmacommunitynetwork.org>.

NEA developing video IAQ training video modules: The National Education Association (NEA) Health Improvement Network (HIN) is creating modules which will be available on the NEA HIN website when completed. The modules will cover indoor air quality in general, specific topics (mold; ventilation; IAQ management plans; the utility of indoor air quality testing; air cleaning devices and ozone) and the EPA IAQ Tools for Schools program. Shelly Rosenblum is one of the interviewees.

EPA REGION 9-SPECIFIC ACTIVITIES

2008 Indoor Environments Request for Proposals (RFP): Our RFP closing date was September 10, 2008. A total of \$115,000 was available. Two California applicants were selected, out of a total of four, but awards have not yet been made. The grants are for the purpose of reducing exposure to indoor asthma triggers and improving the indoor air quality in schools. The closed announcement can be viewed at:
<http://www.epa.gov/region09/funding/indoor-environments.html>

International IAQ Conference: Barbara Spark attended "Indoor Air 2008: the 11th International Conference on Indoor Air and Climate" in Copenhagen, Denmark, August 17-22, 2008, and actively participated in the forum on IAQ in schools.

IAQ Tools for Schools (TfS) Activities:

The EPA Region 9 Indoor Environments Team has been working with a variety of new and continuing partners on often multi-partner activities to advance implementation of IAQ management plans in California schools. Highlights of these activities follow.

Tools For Schools Annual Meeting: Barbara Spark and Kathleen Stewart attended the 9th National IAQ Tools for Schools Symposium in Washington, DC, December 4-6, 2008. They met with representatives from California school districts (Pomona USD, Coachella Valley, and others) who were new to "Tools for Schools." We provide full Symposium scholarships to representatives of San Francisco USD and Pomona. A number of the Symposium presentations can be downloaded at <http://www.iaqsymposium.com/agenda.html> The 10th National TfS Symposium will take place January 14-16, 2009.

TfS Training and Presentations: Shelly Rosenblum provided "Tools for Schools" (IAQ TfS) trainings for members of the Sonoma and Solano County Asthma Coalitions, including maintenance/facilities managers from the Fairfield-Suisun, Vallejo and Vacaville school districts.

High School presentations: Shelly Rosenblum gave lessons on indoor air quality to two AP science classes at Skyline High School in Oakland. Shelly has been working with Earthteam, a coalition of Bay Area science teachers. One of their projects, Something's In the Air, focuses on the air pollution - asthma connection. As part of their lessons, the teacher had the students completing IAQ surveys in their other classes. Shelly is continuing this work. *More on training follows in other postings.*

IAQ Tools for Schools (TfS)/California Teachers Association (CTA): CTA has been awarded another two-year grant from The California Endowment (TCE) for work on school IAQ/asthma. Barbara Spark and Shelly Rosenblum continue to participate in the project's planning committee, and link to individual school district initiatives via this project.

CTA/Fairfield-Suisun Unified School District: Fairfield-Suisun USD has become a model of district/teachers' union collaboration on implementation of IAQ Tools for Schools. Susan White of the Solano Asthma Coalition, part of CAFA (Community Action to Fight Asthma) has played a major role in facilitating this project, with technical support from Shelly Rosenblum and Barbara Spark. As befits a successful project, upper management (the Interim Superintendent) was involved in the initial project meeting, along with Directors of M &O, Custodial Services, Purchasing and Risk Management, along with representatives of the Asthma Coalition, CTA, EPA, and importantly, the highly motivated local teachers union President. The district already had many excellent IAQ and green purchasing and cleaning practices in place, and thanks to union and asthma coalition engagement, has taken the

additional step of involving teachers. We participated in the June 28 Solano County Asthma Awards luncheon, where Barbara Spark presented an IAQ TfS "Leadership Award" to the FSUSD Superintendent.

In an extension of union leadership at FSUSD, Fairfield-Suisun Teachers Union president Melanie Driver brought together teachers' union leaders from the Vacaville, Vallejo, Dixon, Travis and Benicia school districts to learn about IAQ Tools for Schools and opportunities for collaboration on Tools for Schools with us, the Solano County Asthma Coalition, and the CTA "Healthy Air, Healthy Kids" project. Shelly and Barbara gave presentations.

CTA/San Juan USD: A TfS "pilot" project is underway at San Juan USD. The Indoor Environments Team met with Steve Duditch, President of the San Juan Teachers Association, and Don Myers, San Juan USD Facilities Director, to develop a plan for the union/district/EPA collaboration to implement IAQ Tools for Schools at this 78 school, 47,000 student district in Sacramento County. Janis Nielsen of CTA is assisting in this effort. The hope is to create a "model," very high profile TfS program, with a district IAQ team incorporating representatives from every stakeholder from the PTA to the School Board. We provided a five hour IAQ TfS training workshop for 31 members of the San Juan Teachers Association on Saturday, November 15, 2008, with the participation of Bob Davis, the district's Director of Maintenance and Operations.

CTA Outreach Video: CTA is creating a DVD on the "Healthy Schools/Healthy Kids" IAQ/asthma project for internal distribution. Shelly Rosenblum was interviewed about IAQ TfS.

California School Boards Association (CSBA): School IAQ/Asthma and California School Boards Association (CSBA): CSBA has received a grant from The California Endowment to advance school policies on indoor air and asthma in California schools. CSBA brought in Dr. Joan Edelstein as their Senior Health Consultant. We've been working closely with this project, beginning with coaching on the history of IAQ efforts in California schools. CSBA is forming a Steering Committee to advance the school asthma objectives (including IAQ) in the Strategic Plan for Asthma in California. We've been participating in the planning group, which met with California Superintendent of Public Instruction Jack O'Connell in December. The Superintendent's office will co-chair this important initiative.

IAQ Tools for Schools at Los Angeles Unified School District (LAUSD): Barbara Spark met in September with Joel Jordan, Director of Special Projects and senior policy advisor to A.J. Duffy, the President of the 48,000 member United Teachers of Los Angeles (UTLA) union. Jordan agreed on the value of UTLA engagement with TfS at the district. However, the IET has put this collaboration "on hold" due to staffing changes in EH&S at the district, and distractions related to the current school budget crisis. In November, the LAUSD nursing program gave a TfS presentation to the district's Elementary Principals' Association, thanks to Association President Dr. Christopher Ortiz, an active member of the LAUSD IAQ Advisory Group. The principals were very responsive: about 50 expressed interest in implementing IAQ TfS at their school sites.

IAQ Tools for Schools at San Francisco USD: The IET has been supporting the efforts of Jacqueline Chan, the Indoor Air Quality Coordinator hired by the San Francisco Department of Public Health to assist SFUSD with implementation of Tools for Schools. This position was funded partly by a grant from our program. In particular, Shelly Rosenblum has provided coaching, walkthrough assistance, and training for site-based Coordinators.

IAQ Tools for Schools at Santa Ana USD: Promising initial conversations on IAQ Tfs were held with Camille Boden, Risk Manager for SAUSD, and Dr. Dave Barton, President of the SAUSD teachers' union.

IAQ Tools for Schools (Tfs) in Kern County : Shelly Rosenblum and Barbara Spark provided a half-day Tfs workshop for school district Superintendents and CBO's, hosted by the County Superintendent of Schools, in Bakersfield on February 15, 2008. Also attending was the President of the CTA chapter at Kern H.S. district, the largest H.S. district in California.

IAQ Tools for Schools (Tfs)/Sacramento area: Shelly Rosenblum and Barbara Spark provided a 5-hour IAQ Tfs workshop for 21 school Risk Managers and Maintenance and Operations Directors from several area school districts on behalf of Schools Insurance Authority, a nonprofit insurer in Sacramento, on November 19, 2008. Randy Smith from the University of Tulsa also presented and assisted with a demonstration school walk-through.

ASTHMA

EPA National Asthma Forum: Barbara Spark participated in EPA's 3rd national Asthma Forum, May 1-2, 2008 in Washington, DC. This very well-developed event reflected significant national progress in the development of asthma coalitions. We were able to provide only two Asthma Forum scholarships this year, one of which went to the Stanislaus County Asthma Coalition. Due to the budget situation, out of approximately 250 attendees, just ten were from California, including presenters. The 2009 National Asthma Forum will take place June 4-5, 2009, in Washington, DC. For more information:
<http://www.epaasthmaforum.com/>

RAMP/CAFA: Barbara Spark continues to serve on the Advisory Group for RAMP, the Regional Asthma Management and Prevention Initiative, which serves as the statewide coordinator of CAFA, Community Action to Fight Asthma. Barbara also participates in the Schools and Environment committees. RAMP has greatly increased the scale and scope of its activities, thanks for a major grant from CDC.

RADON

"Radon Leaders Saving Lives" campaign: , EPA launched a new program which seeks to double effective actions taken by stakeholders to reduce radon risk in the next five years. See <http://www.radonleaders.org/>

EPA Audit of the California Radon Program: The audit revealed that the program is meeting or exceeding workplan goals. The audit also revealed challenges imposed by the ongoing lack of a State budget at the time the audit was conducted. Even after the passage of the State budget, the monetary crisis looms large; the State Radon Program was temporarily cut in October but subsequently reinstated.

[back to top](#)

U.S. Federal Interagency Committee on IAQ

<http://www.epa.gov/iaq/ciaq/>

– Philip P. Jalbert (Jalbert.Philip@epamail.epa.gov)

CIAQ has posted a factsheet summarizing their presentations from 2003-2008 with author contact information at http://www.epa.gov/iaq/ciaq/past_ciaq_presentations.pdf Minutes of their quarterly meetings can be found at <http://www.epa.gov/iaq/ciaq/meetingschedule.html>. The next meeting is scheduled for February 18, 2009.

To join the CIAQ listserv and receive meeting notices, minutes and other CIAQ news; send an email with a blank 'subject' line to: ciaq-subscribe@lists.epa.gov.

[back to top](#)

FUTURE MEETINGS

Upcoming meetings of the CIWG-IAQ are scheduled as follows:

- March 11, 2009
- June 10, 2009
- September 9, 2009
- December 9, 2009

[back to top](#)