

# California Interagency Working Group on Indoor Air Quality

## Combined Meeting Notes:

**December 9, 2003 (DHS Richmond Laboratory Campus)**

**and**

**March 10, 2004 (CalEPA HQ Building, Sacramento)**

### GENERAL ANNOUNCEMENTS

### SPECIAL PRESENTATION

### **AGENCY REPORTS ON CURRENT IAQ ACTIVITIES**

[American Lung Association of California](#)

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

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

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

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

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

[California Department of Health Service / Tobacco Control Section](#)

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

[California Energy Commission](#)

[California State Library – California Research Bureau](#)

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

[Office of Environmental Health Hazard Assessment](#)

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

[Stanford University](#)

[UC Berkeley Labor Occupational Health Center](#)

[UC Environmental Health & Safety Program](#)

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

### **WORKING GROUP COMMITTEES**

Indoor Environmental Quality of Schools

Building Design and Operations

## **FUTURE MEETINGS**

## GENERAL ANNOUNCEMENTS

Governor Gray Davis was recalled in a special election on October 7, 2003. Arnold Schwarzenegger swore in as California's 38th governor on November 17, 2003.

*Coalition for Adequate School Housing (CASH) Conference* will be held February 23 to 26 in Sacramento (see CDE notes).

*5th Annual Recycled Product Trade Show* takes place March 9 to 11, 2004 in Sacramento. See <http://www.associationtradeshows.com/ciwmb/Schedules.htm> for details.

## SPECIAL PRESENTATION

None at these meetings.

## AGENCY REPORTS ON CURRENT IAQ ACTIVITIES

**American Lung Association of California**      <http://www.californialung.org/>  
-- Bonnie Holmes-Gen ([bhgen@alac.org](mailto:bhgen@alac.org))

**IAQ In Schools Bill**. ALAC is planning to sponsor legislation to increase state involvement and assistance in improving indoor air quality in schools. ALAC's legislative proposal would address some of the solutions listed in the ARB/DHS report, *Portable Classroom Study: A Report to the Legislature* report. It would address indoor air quality in all classrooms with the aim of improving school environments and student lung health.

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**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](mailto:mjenkins@arb.ca.gov))

**AB 1173 IAQ Report Update**. ARB has posted an updated schedule at its AB 1173 website (see <http://www.arb.ca.gov/research/indoor/ab1173/ab1173sch.htm>) for the review and completion of the Report to the Legislature on Indoor Air Quality, required under AB 1173, Keeley. The first draft is expected to be released for public review mid-April 2004, with subsequent peer review by University of California scientists followed by review by ARB's Board in September 2004. Contact: Dorothy Shimer, [dshimer@arb.ca.gov](mailto:dshimer@arb.ca.gov) or Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov).

**American Public Health Association Conference Presentation.** Staff presented the results of a recently completed ARB-DHS study, [Environmental Health Conditions in California's Portable Classrooms](#), at the annual conference of the American Public Health Association (APHA) in San Francisco in mid-November. The APHA conference attracts over 10,000 attendees each year, and offers sessions on all aspects of health, including environmental health. The Portable Classrooms Study presentation was made at a session entitled "Children's Environmental Health–Healthy School Environments: From Policy to Action," sponsored by APHA's Environment Section. Representatives from US EPA presented information on EPA's new "Healthy School Environments Web Portal" (<http://www.epa.gov/schools>), discussed results of an EPA survey on indoor air quality management practices in US schools, and reviewed EPA's *IAQ Tools for Schools Program* and its major principles. A speaker from Connecticut discussed a case study of a school with indoor air quality problems and how they were resolved. Other sessions of special interest focused on "The Built Environment" and on childhood asthma. Contact: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov).

**Contributions to Relocatables Working Group.** Staff reviewed and commented on various documents prepared by the Relocatables Working Group (RWG), a subgroup of the Sustainable Building Task Force, and attended recent meetings of the group. The RWG is coordinated by the Division of the State Architect and the Integrated Waste Management Board, and includes numerous state agencies and some external stakeholders as well. The RWG is currently developing recommended revisions to the contract specifications used by OPSC for new portable classrooms purchased by the State and leased to school districts at a reduced rate each year. Although OPSC only orders about 200 new portable classrooms each year, the revised specifications are expected to have a large impact on portable classrooms manufactured and sold in California, because OPSC's specifications often serve as the baseline for requirements used by school districts when ordering portables directly from manufacturers. Contact: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov), Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**Fact Sheets On Indoor Air Quality Design For Schools.** We provided extensive comments on draft fact sheets aimed at helping school designers reduce building material emissions and moisture problems. The fact sheets summarized information presented at a recent workshop sponsored by the [Collaborative for High Performance Schools](#) (CHPS), a public-private consortium established to promote healthy, resource-efficient K-12 school buildings. Our recommendation to include a fact sheet on providing good ventilation for classrooms was not implemented yet due to budget limitations. The fact sheets were revised and posted on the web, along with a series of other fact sheets and publication lists regarding indoor environmental quality in K-12 schools. Contact: Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**Further Analysis of Portable Classrooms Study Data.** ARB's Research Screening Committee approved a Request For Proposals (RFP) for further analysis of the extensive data collected in the Study of Environmental Health Conditions in California's Portable Classrooms, a study jointly conducted by the ARB and the Department of Health Services. The RFP was released in November, and proposals are due in early January. The new analyses will focus on ventilation, lighting, and other energy-related data collected during the

study, and the relationship of those factors to indoor air quality and other environmental measures. Some analyses will address environmental justice questions as well. This project is the first of several to be funded by the California Energy Commission using PIER funds. Contact: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov), Susan Lum, [slum@arb.c.gov](mailto:slum@arb.c.gov).

**Healthy Schools Design Workshop.** Staff participated in planning meetings for a workshop designed for good indoor air quality (IAQ) in schools. The meetings were organized by the Technical Committee of the [Collaborative for High Performance Schools](#) (CHPS), a public-private consortium established to promote healthy, resource-efficient K-12 school buildings. The workshop's primary purpose is to provide CHPS members with IAQ information needed to update the CHPS Best Practices Manual and criteria regarding IAQ. Workshop topics include emission testing of building materials, moisture control, effective ventilation, building commissioning (performance testing), and case studies. Manufacturers of building materials, including resilient flooring and low- or no-emission carpets, will be invited to participate in the interactive sections of the workshop. ARB staff will be presenting results of the [Portable Classrooms Study](#) at the workshop, which is planned for December 11, 2003 in San Francisco. Contact: Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**Indoor Particulate Matter Health Effects Workshop.** Experts in indoor air quality, particulate matter, air pollution epidemiology, PM health effects, costs of indoor pollution, and statistics were convened for a two-day workshop to discuss the health impacts of indoor PM of indoor and outdoor origin, to quantify those impacts and their associated costs to the extent feasible, and to identify key information gaps. The group generally concluded that the health effects of PM in environmental tobacco smoke, and that of radon progeny, are relatively well known and can be quantified, and that some of the effects of indoor biological contaminants, such as transmissible disease organisms, can be reasonably quantified. However, the group also noted that there was very little data that directly addresses whether the health impacts that have been associated with outdoor PM mass might also result from PM originating from indoor combustion sources, such as woodburning appliances, cooking, and burning of candles. Contact: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov).

**New Home Ventilation Practices Survey.** The ARB's Research Screening Committee approved an interagency proposal from UC Berkeley and LBNL to develop and conduct a mail survey of about 1,000 new single-family homes in selected areas of California. A subset of homes with "fresh-air" ventilation systems will be included. Residents will be asked about their use of windows, doors, fans, and mechanical ventilation, and about their perceptions of indoor air quality and comfort. The results will be analyzed to examine the key factors that determine occupant ventilation practices, and to identify barriers to occupant use of natural and mechanical ventilation to achieve adequate air exchange. The CEC is funding this study, which will provide information the CEC needs to assess the impact of current energy efficiency standards and help determine the need for mechanical ventilators in new homes. The study, expected to begin this spring, will also provide ARB the information needed for planning future research on exposures to Toxic Air Contaminants. Contact: Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**Presentation on Classroom Noise, Ventilation, and Indoor Air Quality at National Conference.** We presented the major results and recommendations regarding classroom noise, ventilation, and indoor air quality from the [California Portable Classrooms Study](#) at the annual conference of the American Society of Heating, Refrigerating, and Air-conditioning Engineers ([ASHRAE](#)) in Anaheim. Classroom noise levels measured in empty classrooms with the ventilation system operating frequently exceeded community outdoor noise limits and target levels recommended by ANSI, the World Health Organization, and the CHPS guideline level of 45 decibels. Other presenters on the panel also shared their results of noise measurements in portables, and their recommendations for reducing those noise levels. The papers are available at the website for the [ASHRAE Technical Committee 2.6, Sound and Vibration Control](#). Contact: Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**Presentation to School Facility Manufacturers' Association.** In October, staff presented the major results and recommendations of the *Report to the Legislature on Environmental Health Conditions in California's Portable Classrooms* to school facility manufacturers and their associates at the Fall Business Meeting of the School Facility Manufacturers' Association (SFMA) in Costa Mesa. The meeting was held in conjunction with a fall conference sponsored by the Coalition for Adequate School Housing. ARB's presentation stressed the need for manufacturers to reduce noise levels of ventilation and lighting systems, and to use alternative materials to reduce formaldehyde levels in new classrooms. Manufacturers were interested in the results of the study; many had previously met with us or reviewed and commented on the draft report. The SFMA also invited State representatives from the Division of the State Architect (DSA), which approves new school designs, and the Office of Public School Construction (OPSC), which oversees allocation of funds to schools for facility construction and leases portable classrooms to needy school districts, to speak at the meeting. Contact: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov).

**Roundtable at Coalition for Adequate School Housing Conference.** Staff conducted successful roundtable discussions on the key results and recommendations from the Portable Classrooms Study report at the annual conference of the Coalition for Adequate School Housing (CASH), held at the Sacramento Convention Center. Participants in the roundtable included school officials, school facility managers and consultants, and others. A four-page summary was distributed and was very useful, although the need for a 1-page "to-do" list for schools that lists key websites with useful checklists and guidance became apparent. Contacts: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov), Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**School Maintenance Workshops.** Staff presented findings of the [Portable Classrooms Study](#) at workshops for school facility maintenance personnel in southern California and in Clovis. The workshops summarized hot issues for school maintenance programs such as indoor air quality (IAQ), restroom sanitation, and stormwater pollution. The Maintenance Network of the [Coalition of Adequate School Housing](#) sponsored the workshops. The Network consists of 180 school districts and affiliates from across the State; its goal is to strengthen maintenance efforts statewide and to increase public and legislative awareness and funding for school maintenance. One finding of the Portable Classrooms Study was that only about 10% of school facility managers were aware of and used available guidance on maintaining IAQ in schools. Attendees were interested in results of the study, and provided

useful feedback on types of maintenance and staffing problems they face. The [Clovis Unified School District](#) recently won a Tools for Schools award from EPA for their participation in the Tools for Schools Program, so staff from the Clovis District gave a presentation on their IAQ Maintenance Program. Their program includes rapid response to complaints, a \$2,000 kit of handheld monitors, twice-daily flushing with fresh air, measures to control moisture and condensation, and frequent outreach to school personnel. They have reduced IAQ complaints by 60%, and have strong support from the District Superintendent. Contact: Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**School Ventilation Roundtable.** Staff participated in a roundtable discussion of improvements needed in school ventilation systems with manufacturers and state representatives, sponsored by Geary Pacific and Bard Manufacturing. Noise was the number one issue discussed: as ARB’s Portable Classrooms Study showed, noise levels in classrooms are much too high, exceeding most applicable noise guidelines and standards. Bard representatives indicated that ventilation systems can be provided to operate in the mid-40 decibel range, which would meet the interim state standard of 45 decibels for classrooms recommended by the Portable Classrooms Study report to the Legislature. Contact: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov).

**State Sustainable Building Task Force Meetings.** Staff participated in meetings of the State Sustainable Task Force and its Technical Group to discuss the State’s current and planned “green building” activities. The Task Force is a group of State agencies implementing the Governor Davis’s [EXECUTIVE ORDER D-16-00](#), which established the goal of sustainable, healthy state buildings. A number of green building activities were discussed (see related entries from other agencies). Most importantly, continuation of the Task Force under the new Governor is anticipated, although still uncertain. Contacts: Peggy Jenkins, [mjenkins@arb.ca.gov](mailto:mjenkins@arb.ca.gov), Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**Study of Costs and Benefits of Green Buildings.** Staff provided comments on the draft report documenting the costs and benefits of green buildings, primarily office buildings. ARB co-funded the report, along with six other state agencies in the state’s Sustainable Building Task Force, including the Department of General Services, the California Energy Commission, and the Integrated Waste Management Board. The authors found that green buildings cost less up front than popularly believed, and that they give a great payback...10 times the initial investment. The benefits are mostly due to improved worker productivity, but include benefits from conservation of various environmental resources. Click for the [final report](#). Contact: Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

**Technical Committee, Collaborative for High Performance Schools.** Staff participated in organizing the CHPS workshop on IAQ in schools. At the workshop, staff presented the results on ventilation, noise, and IAQ from the [California Portable Classrooms Study](#). Staff also commented on the CHPS fact sheets on building material selection and moisture control that were a result of the workshop and the draft Operations and Maintenance manual (Best Practices Manual, Volume 4, and on planned revisions to Volumes 1-3). Contact: Tom Phillips, [tphillip@arb.ca.gov](mailto:tphillip@arb.ca.gov).

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## California Department of Education / School Facility and Planning Division

-- Tony Hesch ([thesch@cde.ca.gov](mailto:thesch@cde.ca.gov))

<http://goldmine.cde.ca.gov/facilities/>

### Upcoming Conferences.

- The 25th annual *Coalition for Adequate School Housing (CASH) Conference* will be held February 23- Feb 26 in Sacramento. This conference will highlight many of the indoor air quality issues facing schools today. See <http://www.cashnet.org/meetings/index.html>
- The *California Association of School Business Officials (CASBO) Conference* will be held April 16-19. Indoor air quality and all environmental issues facing schools will be covered with a more hands on approach than what we usually see in CASH. <http://www.casbo.org/develop/CurrentConferenceYearFiles/ConferenceHomePage.htm>

**New Law Regarding School Sites Near Freeways.** SB 352, effective January 2004, addresses school sites near sources of traffic pollution. The bill amends various parts in the Education Code and Public Resource Code relating to potential air quality impacts from school sites proposed within 500 feet of busy freeways and corridors. CDE is working with local school districts in implementing and interrupting these changes.

**Powerline Set-back Policy.** CDE is in the process of circulating for comments a *powerline set-back policy* to the experts and community groups concerning EMF (Electro Magnetic Fields) exposure. This policy is intended to allow school districts when considering a new school site to look at all sources from EMF rather than only adjacent power transmission lines. If, via an EMF management plan, it can be shown that the overall exposure potential can be reduced, then a variance can be considered that would allow a school to be located closer to a power transmission line than what is presently identified in CCR, Title 5.

**Portable Classrooms Study Presentation.** At a recent CDE staff meeting, Tony Hesch presented a detailed report regarding the ARB/DHS Portable Classroom Study. Duwayne Brooks, our Director, added to the presentation, highlighting the report recommendations.

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## California Department of Health Service / Environmental Health Investigations Branch

-- Sandra McNeel ([SMcNeel@dhs.ca.gov](mailto:SMcNeel@dhs.ca.gov))

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

**Asthma Grant.** The Centers for Disease Control and Prevention has funded a five-year project in California to implement the *Statewide Strategic Plan for Asthma*. Entitled "California Breathing", the initiative supports building State capacity to implement parts of the Strategic Plan and building a broad alliance with non-governmental organizations to carry out other parts of the Strategic Plan. This project includes research on asthma surveillance, race/ethnicity disparities in asthma prevalence and severity, asthma in schools and fostering governmental and non-governmental agency partnerships to improve communication and

advance the implementation of the *Statewide Strategic Plan for Asthma*. California Breathing is pleased to announce the publication of its most recent scientific factsheet:

***Asthma in California: Meeting the Challenge of Healthy People 2010***. Shaikh N, Von Behren J, Stockman JK, Kreutzer R. California Asthma Facts, Volume 1, Issue 2. December 2003. Environmental Health Investigations Branch, California Department of Health Services. Full text of the factsheet is available at: [http://www.ehib.org/cma/project.jsp?project\\_key=CABR01](http://www.ehib.org/cma/project.jsp?project_key=CABR01) (Scroll down to “California Asthma Facts December 2003”)

For more information, including full text access to other asthma publications produced by California Breathing and staff contact information, please visit [www.californiabreathing.org/](http://www.californiabreathing.org/).

**Asthma Database**. The California County Asthma Hospitalization Chart Book was recently completed. This document analyzes 1998-2000 data to provide information to counties on progress toward achieving the national *Healthy People 2000* objective of reduced asthma hospitalizations. Hospitalization rates are shown separately by race/ethnicity and for children (0-14 years) to help county health officials identify populations most at risk for severe asthma morbidity. The Chart Book, APHA presentations abstracts, and other materials related to Ehib activities related to asthma, can be downloaded from the Ehib web site at [http://www.ehib.org/cma/topic.jsp?topic\\_key=20](http://www.ehib.org/cma/topic.jsp?topic_key=20). For additional information, please contact Jamila Stockman, [jstockma@dhs.ca.gov](mailto:jstockma@dhs.ca.gov).

**Asthma Presentations**. Several Ehib staff presented results of asthma-related research at the **2003 American Public Health Association** annual conference in San Francisco:

- *Self-reported asthma prevalence among children: Findings from the California Health Kids Survey* (Nazerah Shaikh, et al.)
- *Asthma environmental practices and asthma awareness in California childcare centers* (Michelle Goveia, Nazerah Shaikh, et al.)
- *Addressing environmental risk factors for asthma in California licensed childcare centers* (Katherine Feldman, Michelle Goveia, Richard Kreutzer)

**Toxic Mold Protection Act (SB 732)**. SB 732 requires DHS to provide a report to the California Legislature describing the implementation status of the bill’s requirements. This report is in final draft and is undergoing administrative review. When it is approved for public release it will be added to the DHS Indoor Air Quality website at [www.dhs.ca.gov/iaq/](http://www.dhs.ca.gov/iaq/) in the Mold section. Contact: Sandy McNeel, [smcneel@dhs.ca.gov](mailto:smcneel@dhs.ca.gov).

**Environmental Tobacco Smoke**. The Environmental Epidemiology Section is pleased to announce the publication of 2 recent manuscripts:

***Secondhand smoke exposure in adulthood and risk of lung cancer among never smokers: A pooled analysis of two large studies***. By Brennan P, Buffler PA, Reynolds P, et al. *International Journal of Cancer*. 2004 Mar 10;109(1):125-31. This analysis identified clear dose-response relationships consistent with a causal association between exposure to secondhand smoke from spousal, workplace and social sources and the development of lung

cancer among never smokers. The abstract is available on-line:

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=14735478&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=14735478&dopt=Abstract).

***Active Smoking, Household Passive Smoking and Breast Cancer: Evidence from the California Teachers Study.*** Peggy Reynolds, Susan Hurley, Debbie E. Goldberg, Hoda Anton-Culver, Leslie Bernstein, Dennis Deapen, Pamela L. Horn-Ross, David Peel, Richard Pinder, Ronald K. Ross, Dee West, William E. Wright, Argyrios Ziogas. Journal of the National Cancer Institute, Vol 96, No 1, pages 29-37, January 7, 2004. This study found increased incidence of breast cancer in current smokers compared to never smokers. Current smoking was associated with increased breast cancer risk relative to nonsmokers in women without a family history of breast cancer but not among women with such a family history. The abstract is available on-line:

[http://jncicancerspectrum.oupjournals.org/cgi/content/abstract/jnci;96/1/29?fulltext=&searchid=QID\\_NOT\\_SET](http://jncicancerspectrum.oupjournals.org/cgi/content/abstract/jnci;96/1/29?fulltext=&searchid=QID_NOT_SET)

**California Environmental Health Tracking Program (SB 702).** On February 23, 2004, the California Policy Research Center (a program of the University of California Office of the President) released the final report of the expert working group. The report is available on the Program website: [www.catracking.com](http://www.catracking.com). This document details recommendations to the California Legislature for developing an interagency Office of Environmental Health Tracking, to be established and run by the Department of Health Services and the California Environmental Protection Agency. Among its goals would be to enhance the capacity of state laboratories to monitor human samples for contaminants; develop new surveillance systems for priority environmentally related diseases, including asthma, childhood neurodevelopmental disorders, and neurodegenerative disorders (such as Alzheimer's and Parkinson's disease); report hazard, exposure, and health-outcome data by race, ethnicity, and income to be able to monitor issues of environmental justice; and provide technical assistance to communities so people can participate meaningfully in public-health policymaking. Please see the report for more complete information. Contact: Mimi Johnson, [mjohnson@dhs.ca.gov](mailto:mjohnson@dhs.ca.gov).

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## **California Department of Health Service / Indoor Air Quality Section**

-- Jed Waldman ([JWaldman@dhs.ca.gov](mailto:JWaldman@dhs.ca.gov))

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

**Budget Cuts Hits IAQS.** The ongoing budget crunch has hit the IAQS, and we have recently lost one staff position, and our operating budget has been severely reduced. This fall, our department experienced a reduction in FTE's for personnel services, and our public health chemist II position was taken away. Nitin Kapadia, who was with the branch for over 10 years, fortunately was not laid off; instead, he was relocated to a position in the Environmental Laboratory Accreditation Program (ELAP). This is a serious loss for our group, and, with the reduction in our operating budget, it is affecting our ability to carry out our field and laboratory studies. One small consolation is that ELAP is planning to assess

accreditation of laboratories conducting IAQ (and VOC) measurements. So, we will have the opportunity to work with Nitin in the future.

**Building Materials Emissions Study.** Limited additional material testing is continuing with in-house resources. Discussions have begun regarding a follow-up study on tire-derived rubber flooring, possibly funded by CIWMB.

**IAQ Study of East End Buildings.** Staff began measurements of VOC concentrations, as well as ventilation, at the East End Complex in the fall. This study is being funded by U.S. EPA, and so far measurements have been made 1-3 times in each of the five buildings. A progress report is being prepared and will be submitted to EPA in February.

**Dialog with Carpet Industry.** The dialog on material testing among State and industry stakeholders, representatives of the carpet industry met with DHS and IWMB staff is continuing, and there was a daylong meeting among the groups at the DHS Laboratory in Richmond on December 16, 2003. The follow-up (to the August 2003 meeting) addressed technical issues related to harmonizing testing protocols used by the Carpet & Rug Institute (CRI) *Green Label* certification and the State's Section 01350 emissions testing specification.

[The Carpet & Rug Institute (CRI) has developed a set of programs for testing and labeling carpets, adhesives and cushion materials. The CRI's Green Label criteria currently include maximum emission factors (mg/m<sup>2</sup> ·hr) for formaldehyde, styrene, 4-Phenylcyclohexene (4-PC), and total volatile organic compounds (TVOC). Information on CRI is available on-line at <http://www.carpet-rug.com/>]

**BASE Study.** Janet Macher and Feng Tsai are preparing invited manuscripts on fungal and bacterial exposures (respectively) for a special issue of the journal *INDOOR AIR*. They have given several presentations on these findings at recent conferences (see below).

**Portable Classroom Study.** See ARB notes.

### **Recent Presentations:**

#### ***American Public Health Association Annual Meeting, San Francisco, CA (Nov. 2003)***

“Housing Quality, Pest Infestations, and Pesticide Use Among a Cohort of Latina Pregnant Women and Their Children”, Asa Bradman et al., including Janet Macher

[http://apha.confex.com/apha/131am/techprogram/paper\\_56844.htm](http://apha.confex.com/apha/131am/techprogram/paper_56844.htm)

“Overview of Allergens and Airborne Bacteria and Fungi in 100 U.S. Office Buildings”, Derek Shendell, Janet Macher, Feng Tsai and Lauren Burton,

[http://apha.confex.com/apha/131am/techprogram/paper\\_61424.htm](http://apha.confex.com/apha/131am/techprogram/paper_61424.htm)

“Public Health Agency Responses to Indoor Mold Issues in California”, Jed Waldman,

[http://apha.confex.com/apha/131am/techprogram/paper\\_74140.htm](http://apha.confex.com/apha/131am/techprogram/paper_74140.htm)

“California Portable Classrooms Study: Results and Implications”, Peggy Jenkins et al, including Jed Waldman,

[http://apha.confex.com/apha/131am/techprogram/paper\\_72178.htm](http://apha.confex.com/apha/131am/techprogram/paper_72178.htm)

***American Association for Aerosol Research Annual Meeting, Anaheim, CA (Nov. 2003)***

“Airborne Endotoxin Inside and Outside Homes in the Fresno (CA) Asthmatic Children’s Environment Study (FACES)”, S. Kathie. Hammond et al., including Janet Macher

***American Society for Biological Safety Annual Meeting, Philadelphia, PA (Oct. 2003)***

“OSHA’s E-Tool on Legionnaires’ Disease: Is the Information Accurate, Current, and Complete?”, Janet Macher and Richard Danielson

***Fifth International Conference on Bioaerosols, Fungi, Bacteria, Mycotoxins and Human Health, Sarasota Springs, NY (Sept. 2003)***

“Airborne Microorganisms and Allergens in 100 Large U.S. Office Buildings: Design and Selected Results from a Preliminary Analysis of the USEPA BASE Study”, Derek Shendell, Janet Macher, Feng Tsai, and Lauren Burton.

***99<sup>th</sup> International American Thoracic Society Conference, Seattle, WA (May 2003)***

“Concentrations of Airborne Endotoxin Inside and Outside Homes in the Fresno (CA) Asthmatic Children’s Environment Study (FACES)”, S. Kathie. Hammond et al., including Janet Macher

**Recent Papers :**

Wagner, J.; Macher, J.M.: Comparison of a passive aerosol sampler to size-selective pump samplers in indoor environments. *Am. Ind. Hyg. Assoc. J.* 64:630–639 (2003).

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**California Department of Health Service / Occupational Health Branch**

-- Liz Katz ([Ekatz@dhs.ca.gov](mailto:Ekatz@dhs.ca.gov))

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

**DHS Physician Appointed to Standards-Setting Agency for Occupational Safety and Health.**

Dr. Robert Harrison, chief of OHB’s Occupational Health Surveillance and Evaluation Program (OHSEP), was appointed to the State Occupational Safety and Health Standards Board (OSHSB) as the occupational health representative. Dr. Harrison’s appointment expires in June 2006. See [http://www.dir.ca.gov/oshsb/oshsb\\_roster.html](http://www.dir.ca.gov/oshsb/oshsb_roster.html). The Board, within the State Department of Industrial Relations, adopts regulations that are enforced by Cal/OSHA.

**HESIS Health Hazard Alert: 1-Bromopropane.**

1-Bromopropane (n-propyl bromide) is a volatile organic solvent introduced as a replacement for other solvents that damage the upper ozone layer. It is a reproductive hazard and nerve toxin in test animals. So far, it is used mainly in degreasing and in spray adhesives, but is being considered for use in drycleaning and many other industrial functions. No regulations currently protect workers, consumers, or the environment from 1-bromopropane. HESIS is recommending an occupational exposure limit of 1 ppm, and expedited listing under Prop 65. For more information, see the *Health Hazard Alert* on the website [www.dhs.ca.gov/ohb/hesis/bpropane.pdf](http://www.dhs.ca.gov/ohb/hesis/bpropane.pdf), or call (510) 622-4238 for tri-fold, color printed copies.

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## California Department of Health Service / Tobacco Control Section

-- Joanne Wellman-Benson ([JWellman@dhs.ca.gov](mailto:JWellman@dhs.ca.gov))

**Secondhand Smoke Web Site.** TCS, with assistance from the Secondhand Smoke Workgroup and the Tobacco Education Clearinghouse of California (TECC), is developing a Web site for TCS-funded programs to serve as the primary informational resource for relevant and essential secondhand smoke information. Entitled “Smoke-free California-Where We Live, Work, and Play”, the Web site will be organized by these three categories, and will have topics under each that correspond to Secondhand Smoke (SHS) indicators from Communities of Excellence (CX). CX is a community planning model that systematically assesses communities to standardized indicators that address tobacco control issues. The Web site will include information such as relevant science/research, educational materials, media materials, policy, enforcement protocols, sample plans, and documents countering the tobacco industry’s claim about SHS. The Web site should be operational by June 2004. It eventually will be made available for use outside of TCS-funded programs.

**Outdoor Tobacco Smoke (OTS) Pilot Study.** A contract to conduct a pilot study of exposure to SHS in outdoor settings, including building doorways and outdoor dining areas, began in July 2003. The purpose of the 3-month study was to assess the value and feasibility of a more sustained and detailed study of outdoor tobacco smoke exposure. Data collection was completed and data cleaning and analysis is underway. The first draft of the report is due the end of February 2004.

**Clinical Ad Launch.** “Clinical,” a graphic depiction of the instantaneous health consequences of SHS, was featured at a news conference on September 9, 2003, to announce the signing of Assembly Bill (AB) 846. The ad will be translated into four Asian languages: Mandarin, Cantonese, Vietnamese, and Korean.

**Innovation in Prevention Award.** On December 10, 2003, the U.S. Department of Health and Human Services Secretary Tommy Thompson announced the eight winners of the first *Innovation in Prevention Awards* to highlight businesses and organizations that are leading efforts to promote healthy lifestyles in their communities. These awards, part of the *HealthierUS* initiative, recognize organizations in seven categories that have implemented innovative and creative chronic disease health promotion and prevention programs. A TCS-funded program, COUGH (Campuses Organized and United for Good Health) Campaign was selected as one of the eight winners and received national recognition in the nonprofit category. The campaign was a combined effort of leadership by the California Youth Advocacy Network and several community-based projects, Local Lead Agencies (LLAs) and colleges/universities. The COUGH campaign was responsible for the September 2002 Amendment to Title 5, in which the CSU Board of Trustees gave power back to campus presidents and encouraged them to create a 20-foot minimum smoke-free doorway policy. To date, 21 of the 23 CSU campuses have made changes.

**Technical Assistance Legal Center (TALC) Fact Sheet On Employees' Rights.** TALC has produced a new fact sheet on the legal rights of employees who face retaliation because they complain about smoking at their work site. A copy of this fact sheet, "*Employees' Rights When Complaining About Smoking at the Workplace: Protection against Employee Retaliation in California,*" is available on TALC's web site (<http://talc.phi.org>) by clicking on "TALC Publications." TALC collaborates with projects throughout the state on SHS and other tobacco-related issues. As with other TALC products, the fact sheet was created to provide tobacco control advocates with user-friendly tools and information to address legal issues related to tobacco control.

### **Recent Legislation**

- **Assembly Bill (AB) 846.** In 2003 former Governor Davis signed into law AB 846, which prohibits smoking within 20 feet of main entrances, exits, and operable windows of any building owned, leased, and occupied by the state, county, or city, and buildings of the University of California (UC), California State University (CSU), and California community colleges. TCS and members of the SHS Workgroup were actively involved in the implementation of the law. There was a mailing to 2500 individuals that described the law and how to order artwork for signage. The mailing was sent to city clerks, city managers, mayors, police chiefs, county sheriffs, county administrators, airports, state-building managers, mass transportation officials, campus police and health and safety officers of UC, CSU, and California community colleges.
- **AB 384.** In 2003 AB 384 was introduced by Tim Leslie (R-Tahoe City) which prohibits the Department of Corrections (DC) and the Department of the Youth Authority (DYA) from selling tobacco products to persons confined in their institutions. It also requires DC and DYA to adopt regulations prohibiting the possession of tobacco products by inmates. It is a two-year bill.
- **AB 210.** In 2003 Assembly Member Joe Nation (D-San Rafael) introduced Assembly Bill (AB) 210 that placed limitations on the smoking that can take place in and around multi-unit housing. It ended up becoming a two-year bill, but was recently dropped by the author due to a lack of sufficient local activity in this area to support a state law. It defined drifting, wafting, or blowing smoke as a nuisance within common interest developments, with some exceptions. It prohibited smoking in the indoor and outdoor common areas of multifamily residential housing, and by January 1, 2006, it would have prohibited smoking in units of multifamily residential housing, except those units that have been specifically designated by a landlord as units where smoking is permitted.

For more information on these items, contact Joanne Wellman-Benson at [jwellman@dhs.ca.gov](mailto:jwellman@dhs.ca.gov) or (916) 449-5514.

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## California Department of Industrial Relations (Cal/OSHA)

--Bob Nakamura ([bnakamura@hq.dir.ca.gov](mailto:bnakamura@hq.dir.ca.gov)) <http://www.dir.ca.gov/dosh/>

**IAQ Advisory Committee.** The first meeting was held on November 20, 2002, in Oakland. The recent California Energy Commission revisions to the building code were presented and discussed. Possible revisions to General Industry Safety Orders 5142 and 5143 were also discussed.

A second meeting was held on March 6, 2003. Attendees discussed the modified proposal for the use of DCV that CEC plans to submit for rulemaking within the next few weeks. Attendees also discussed suggested changes to Title 8, Section 5142. The modifications are intended to address problems in identifying the entity that can make changes to a HVAC system in a workplace. Another meeting is tentatively planned for early 2004.

Deborah Gold and Bob Nakamura have also participated in the review of the survey of portable classrooms done by the Air Resources Board with the Department of Health Services, and the Portable classroom white paper by the Integrated Waste Management Board.

For more information contact Bob Nakamura at 415-703-5160 or Deborah Gold at 415-703-5115. For information about the proposed changes to the California Energy Code, contact the CEC via <http://www.energy.ca.gov> or 1-800-772-3300.

**Airborne Contaminants: 8CCR 5155.** The Division is continuing to review Threshold Limit Value changes proposed by the ACGIH for a number of substances. The first meeting of the advisory committee was on May 4, 2001. The next meeting is scheduled for January 9, 2004. The Division coordinator is Bruce Wallace who can be reached at 415-703-5165.

**Laboratory Fume Hoods: 8CCR 5154.1.** The Division has convened five advisory committee meetings to evaluate two different petitions requesting the Standards Board to reduce ventilation rate requirements and establish a performance standard in place of the existing regulation that relies on face velocity measurements. The final draft proposal was discussed by the members of the committee at the meeting held on September 17, 2003 in Oakland. The Division coordinator is Bruce Wallace who can be reached at 415-703-5165.

**Heat Stress Standard.** The Division has held three advisory committee meetings to review the need and issues involved in proposing a standard for heat stress. The last meeting was on February 15, 2002 in Oakland. A draft proposal was reviewed at the meeting, and changes were drafted for discussion at an as yet unscheduled meeting. For more information, contact Bob Barish at 415-703-5100.

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## California Energy Commission

-- Obed Odoemelam ([Oodoemel@energy.state.ca.us](mailto:Oodoemel@energy.state.ca.us))

**CEC-Pier Projects** Progress is continuing on the Commission's contract with the Architectural Energy Corporation on research to develop and demonstrate an advanced technological approach to effective cooling, heating, and ventilation of classrooms while ensuring acceptable environmental quality and significant building energy savings. This approach would involve the development of an advanced thermal displacement technology for use in California's K-12 schools. The initial part of this research is already underway to identify the limitations of this approach together with the mitigation measures necessary for design guideline development, and effective deployment at the end of the demonstration phase.

The other part of this research program focuses on the effective use of use of UVC light as a disinfectant to minimize the risk of infections from microbial contamination of HVAC coils and drain pans. The effectiveness of the technology on school performance is expected to be reflected in improvements in average daily, health-related school absences. The research approach is currently being re-scoped to identify the best available data set for the necessary improvement assessment.

**Research Funding.** At the Wed, October 22, 2003 Business Meeting, the Commission approved a contract with Gas Technology Institute for \$997,053 to investigate mold-resistant and energy-efficient residential building construction practices. The project will also address maintenance approaches to minimize the mold problem in the modern energy-efficient building. The aim is to eventually incorporate the identified measures into any relevant revisions to the existing California building energy standards. For more information, contact Martha Brook at (916) 654-4086.

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## California State Library – California Research Bureau

-- Pamela Davis ([pdavis@library.ca.gov](mailto:pdavis@library.ca.gov))

**AB 284 Report.** The California Research Bureau (CRB) was mandated under Assembly Bill 284 (Jackson, 2001) to assemble an expert panel and to prepare a report on the effects of fungal contamination on indoor environments. To view the full text of AB 284 on-line visit: [http://leginfo.public.ca.gov/pub/bill/asm/ab\\_0251-0300/ab\\_284\\_bill\\_20011007\\_chaptered.html](http://leginfo.public.ca.gov/pub/bill/asm/ab_0251-0300/ab_284_bill_20011007_chaptered.html)

A description of the bill's requirements and a list of the expert panelist can be found on-line at: <http://www.aiha.org/GovernmentAffairs-PR/html/pr-bill284.htm>. Originally targeted for January 2003 release, the draft report is to be released section-by-section for public comment starting in early 2004. The initial planning for this project considered a three-day open forum during which the SRP could hear testimony from stakeholders, prior to making findings on the report. Due to budgetary constraints, this meeting is not fiscally feasible at this time. Instead, in order to provide ample opportunity for stakeholders to prepare their comments

and submit them to the SRP, we have chosen to release the paper for comment in four sections to allow for a longer review period.

- **First release:** *Biology of Mold, Moisture issues in California Buildings, Prevention of Mold Growth*
- **Second release:** *Health Risk Assessment, Consensus Health Effects, Non-Consensus Health Effects*
- **Third release:** *Assessment & Remediation, Hazard Communication for Distinct Sub-Populations, Recommended Reading List for local officials*
- **Fourth Release:** (Appendices) *Industry Organizations & Available Certification, Summary of Industry Self-Regulation Efforts, Common Indoor Molds including Secondary Metabolites.*

The sections will be released as they are completed, beginning in Early 2004. A 30-day comment period will commence following the release date of each section. Once all sections have been reviewed and the commentary periods have ended, the lead CRB analyst, under the supervision of the review panel, will combine the sections into one report, making revisions where deemed necessary. The combined report, including the findings of the SRP, will then be distributed to the public and interested stakeholders for an additional 30-day final commentary review prior to releasing the report for publication.

Pamela J. Davis, R.N., P.H.N. is a Policy Analyst with the Environmental and Natural Resources Division of the California State Library, California Research Bureau. Mrs. Davis can be contacted at 916/653-5562, or via e-mail: [pdavis@library.ca.gov](mailto:pdavis@library.ca.gov). An earlier CRB report, entitled *Mold, Toxic Mold, and Indoor Air Quality*, was released in March 2001 and can be found on-line at: <http://www.library.ca.gov/crb/01/notes/v8n1.pdf> .

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## **Lawrence Berkeley National Laboratory / Indoor Environments Program**

-- Mike Apte ([MGAPte@lbl.gov](mailto:MGAPte@lbl.gov))

No report this quarter. Consult their web site: <http://eetd.lbl.gov/iep/iep.html>

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

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

-- Richard Lam ([RLam@oehha.ca.gov](mailto:RLam@oehha.ca.gov))

OEHHA recently completed a study "Proximity of California Public Schools to Busy Roads". It will appear in the January 2004 issue of Environmental Health Perspectives. Member of OEHHA, DHS, and CARB are developing fact sheets for schools and for parents on reducing exposures to traffic-related air pollution. Contact Dr. Janice Kim at OEHHA, [jkim@oehha.ca.gov](mailto:jkim@oehha.ca.gov), for additional information.

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

-- Andrea Hricko ([scehsc@usc.edu](mailto:scehsc@usc.edu))

No report this quarter.

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## **Stanford University**

--Wayne Ott ([wott1@stanford.edu](mailto:wott1@stanford.edu))

### **Papers & Presentations.**

- Wayne Ott, Neil Klepeis, and Paul Switzer published a paper entitled, "Analytical Solutions to Compartmental Indoor Air Quality Models with Application to Environmental Tobacco Smoke Concentrations," in the Journal of the Air and Waste Management Association, Vol. 53, pp. 918-936, August 2003. This paper presents previously unpublished equations for predicting pollutant concentrations in different rooms of a home from emissions from an indoor point source.
- Wayne Ott and James Repace co-authored a poster presentation at the ISEA 2003 Annual Meeting in Stresa, Italy, on mathematical modeling of indoor air pollutants from multiple cigarettes smoked in residential settings. The poster compares predictions from the computerized Sequential Cigarette Exposure Model (SCEM) for 7 cigarettes smoked in a bedroom with continuous measurements of carbon monoxide, particulate polycyclic aromatic hydrocarbons, and fine particle mass concentrations measured in the same room. The results showed good agreement between the predicted and measured concentrations. The model can be extended to other cases and settings.
- Wayne Ott and Hans Siegmann co-authored a poster presentation at the ISEA 2003 Annual Meeting held in Stresa, Italy, on how to use two continuous monitors simultaneously to characterize the sources of fine particulates in indoor, outdoor, and in-transit microenvironments. The diffusion charging (DC) monitor responds to the surface area of fine particles, and the photo charging (PC) monitor measures the polycyclic aromatic hydrocarbon mass concentrations present on the surface. From 41 experiments, it was possible to identify characteristic PC/DC ratios for the particles emitted by cooking (frying meat, burning toast), smoking (cigarettes, cigars, and pipes), burning incense, candles, and sage, fireplaces, wood smoke, and motor vehicles. The PC/DC ratio, which expresses the surface PAH per unit area of the fine particles, may be a potentially useful indicator of the toxicity of fine particles.

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## **UC Berkeley – Labor Occupational Health Program**

--Robin Dewey, ([rdewey@uclink4.berkeley.edu](mailto:rdewey@uclink4.berkeley.edu)) <http://socrates.berkeley.edu/~lohpl/>

No report this quarter.

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## UC Environmental Health & Safety Program

-- Debbie Decker ([dmdecker@ucdavis.edu](mailto:dmdecker@ucdavis.edu))

The UC Industrial Hygiene & Safety Committee's *Indoor Air Quality Tools: Education, Prevention, & Investigation (February 2003)* is posted on their web site under "documents", <http://ehs.ucdavis.edu/ehs/ucih/index.cfm>. Additional documents are also available:

Asbestos/Lead Issues Consensus Document  
(Lead Based Paint Sample Results Less Than 600ppm)  
Environmental Consultants for Lead Abatement Specification  
Lead Compliance Plan  
Asbestos and Lead Training Requirements for UC Personnel, Contractors, and Consultants  
Laboratory Safety Design Guide (July 2002)  
Solvent Purification Using the Grubbs Apparatus - Guideline for Use  
Hazards/Problems Associated with Fiberglass Duct Liner - Guidance for Insulating New Ductwork  
Cleaning HVAC Systems.

Our next project with the Indoor Air Quality work group is a partnership with the Lead and Asbestos work group to develop a mold identification and remediation guidance document. We've begun by collecting what already exists within the UC and after the turn of the year, will blaze on in earnest on the document.

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## U.S. EPA Region IX / Indoor Environment Team

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

-- Barbara Spark ([spark.barbara@epamail.epa.gov](mailto:spark.barbara@epamail.epa.gov))  
-- Bill Jones ([jones.bill@epamail.epa.gov](mailto:jones.bill@epamail.epa.gov))  
-- Shelly Rosenblum ([rosenblum.shelly@epa.gov](mailto:rosenblum.shelly@epa.gov))

**Asthma and the Indoor Environment.** Barbara Spark has been increasingly involved in local and state efforts to incorporate indoor environmental issues and "secondary prevention" into asthma management. She is serving on the Senior Advisory Committee for a School Asthma Tool Kit for California schools (aka "Starbright School Asthma Resource Package") being developed by the Starbright Foundation with a grant from the California Endowment. She participated in the Southern California Regional Asthma Meeting, hosted by the American Lung Association of California, and recently served on an Expert Panel on Asthma Quality Improvement held by the Community Benefit Programs, LA Care, LA County's managed care organization, and the largest nonprofit health plan in the United States.

**IAQ Tools for Schools at Los Angeles Unified School District.** LAUSD is making great progress in implementing Tools for Schools at a significant number of its school sites. The

EPA Region 9 Indoor Environments Team participates in the district's IAQ Advisory Group, and has awarded a grant to the School Nursing Program to implement Tools for Schools at one hundred schools over a two-year period. Shelly Rosenblum and Barbara Spark have provided initial training for the project, which will henceforth be provided by Environmental Health and Safety and the school nurses. The district's maintenance and operations department has adopted a preventive maintenance program, and is now an active participant in the IAQ Advisory Group.

**IAQ Tools for Schools at Montebello USD.** As a result of a series of discussions initiated by Barbara Spark with school district administration (Assistant Superintendent for Facilities Pamela Johnson and her staff) and the Montebello Teachers Association (Executive Director Kathy Kohn and the MTA Executive Committee), Montebello USD has agreed to "pilot" implementation of the IAQ Tools for Schools program at approximately one third of its 28 K-12 school sites. We expect this to be an excellent model for active cooperation between district management and unions. MUSD is the third largest public school district in L.A. County, with circa 35,500 K-12 students.

**IAQ Tools for Schools - Shelly Rosenblum's activities.** Shelly has been making presentations on Tools for Schools to a variety of audiences. This include a workshop at the annual CASH conference, a presentation to all of the administrators (principals, risk management, business officials, superintendent) for Tracy Unified School District, to the Health and Environmental Resource Center in San Francisco, and to the Alameda County Office of Education and Alameda County PTA.

Shelly has been engaged in a variety of activities addressing student involvement with indoor air student involvement and education. He's developing Indoor Air Quality Comic Book / Visual Walk-through Checklist for elementary school students, and assisted EPA Region 9 Regional Administrator Wayne Natri in presenting an IAQ Lesson to the 5th grade students at a school in the Capistrano Unified School District. (Capistrano Unified is piloting the Tools for Schools Program). He continues to work with students in the Environmental Science Club at a Walnut Creek High School on a Student-led Tools for Schools Project.

Shelly has conducted Tools for Schools walk-throughs of schools in Oakland and San Francisco, for the West Oakland Asthma Coalition, and the San Francisco United School District as part of our grant assistance to the district.

**IAQ Tools for Schools Symposium.** The 5th Annual Indoor Air Quality Tools for Schools National Symposium will take place on December 2-4, 2004, in Washington, DC. A descriptive flyer can be viewed at <http://www.epa.gov/iaq/schools/symposium.html> Interested parties are advised to register early, as the 2003 Symposium "sold out" much earlier than the application deadline. Registration will open on May 15, 2004.

**Presentation at APHA 2003** Barbara Spark moderated the session "Mold Prevention" at the 2003 American Public Health Association annual conference in San Francisco.

**New Materials Available on IED Web Page.** A variety of new materials are now posted on

our national web page; find links at <http://www.epa.gov/iaq/whatsnew.html> New materials include:

- *Mold in Schools* Fact Sheet, <http://www.epa.gov/iaq/schools/images/moldfactsheet.pdf>
- Updated fact sheet on *Indoor Air Quality and Student Performance*, [http://www.epa.gov/iaq/schools/images/iaq\\_and\\_student\\_performance.pdf](http://www.epa.gov/iaq/schools/images/iaq_and_student_performance.pdf)
- Asthma resources; <http://www.epa.gov/iaq/asthma/> including resources for World Asthma Day (May 4, 2004), a new “Asthma: Home IAQ Assessment Checklist, and for children, the Dusty The Asthma Goldfish and His Asthma Triggers Funbook”

**Elissa Feldman’s retirement.** USEPA Indoor Environments Division (IED at HQ) Deputy Division Director Elissa Feldman has retired after a long career with EPA, including major contributions to the development of EPA’s indoor air program. Bob Axelrad is now Acting Deputy Director.

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## FUTURE MEETINGS

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

- June 9, 2004, DHS Richmond Laboratory Campus
- September 15, 2004, CalEPA Building, 10<sup>th</sup> & I St., Sacramento
- December 8, 2004, DHS Richmond Laboratory Campus
- March 9, 2005, CalEPA Building, 10<sup>th</sup> & I St., Sacramento

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