

Georgia Local Section

Quarterly Newsletter

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World Trade Center Rescuers and Lung Capacity Loss

A recent study published in the *American Journal of Respiratory and Critical Care Medicine* documents the significant decrease in the lung capacity of firefighters who responded to the 9/11 WTC attacks. Since the attacks, the health of workers exposed to dust from the towers' collapse has been closely monitored. The study reports the findings of periodic lung function tests (forced expiratory volume or FEV) administered to 12,000 New York City Fire Department rescue workers between 1997 and 2002. Prior to 2001, firefighters'

FEV scores decreased on average by approximately 31 milliliters of lung volume per year. FEV typically declines with age. However, in the year following the attacks, rescuers exhibited a decline in FEV equivalent to what would be expected after 12 years of aging—there was an average decline among monitored workers of 372 milliliters. The study reports that workers who were present during the towers' collapse lost the most lung capacity. The researchers noted that they are not sure whether lung function

for these individuals will continue to decline, or whether there will be an improvement in their lung capacity over time. Over 50 percent of monitored workers have reported coughing, and 42 percent have experienced shortness of breath when exercising. The study reports that over 400 chemicals were present in the air pollution at Ground Zero. There is still substantial debate over whether exposures could be limited or prevented with earlier and correct use of respiratory protective equipment.

Mold Prevention Strategies

CDC released an updated Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes and

Floods. CDC initially prepared this guide in the fall of 2005 for public health officials and the general public in response to the flooding and the anticipated mold contamination of homes and other structures along the U.S. Gulf Coast associated with hurricanes Katrina and Rita. This revised version addresses broad public health concerns related to limiting exposure to mold and identifying, preventing, and managing mold-related health effects following flooding or major water intrusion events. You can find the guide at CDC's [MMRW web site](#).



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Summer 2006 Local Section Meeting Recap: Pondering the Question of Adequate Review

Our half-day summer local section meeting was held July 12th at the Georgia Tech Conference Center. The interactive workshop was devised and led by Steve Jahn, the WSRC Deputy IH Manager, and we owe him a huge thank-you for bringing his ideas, passion, and time to the table! The result was an engaging format that had attendees working together

through several scenarios requiring a "review" of an MSDS in the context of a proposed work plan. We put on our "IH thinking caps" to devise questions about the nature of the work being proposed, and what we would want to know about the process itself before approving a required chemical or recommending PPE.

The scenarios were based on real events with real

consequences, and reminded us all of what can happen when unknown factors enter into a supposedly "controlled-for" situation. We discussed the need—as safety and health professionals—for defining what constitutes an "adequate review" of a situation, and what methods currently exist. Thanks again Steve for an interesting and timely presentation!

Future Meetings

Mark Your Calendars!

- Fall Meeting: October 18, 2006 (Wednesday), Georgia Tech Research Institute's Conference Center, 250 14th St., Atlanta. Agenda will include AIHA's Teleweb Virtual Seminar: Respirator Protection and Selection (Parts one and two).

ABIH CM Points

The American Board of Industrial Hygiene has awarded 1.0 certification maintenance (CM) points for the Spring 2006 Georgia Local Section Meeting.

The approval number is:

06-1586 Spring Meeting

CM points for the Summer Meeting are in process.

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Substitution: A Potential New Hexavalent Chromium Replacement

Researchers at the Massachusetts Institute of Technology (MIT) have been working to manipulate metals at the atomic level in an effort to devise a suitable substitute for chromium trioxide (CrO₃)—a form of hexavalent chromium (CrVI) commonly used in chromium electroplating industry. Finding a less hazardous replacement which adequately meets the corrosive-resistant, durability, and brightness properties achieved by CrVI has proven difficult. Aside from meeting these physical specifications, an ideal substitute

would require minimal shop/facility restructuring of the plating process in an effort to keep costs down. This new nanotechnology driven process—uniting nickel and tungsten at the atomic level by manipulating the grain size of the elements and how they form a crystalline structure—appears to have a great deal of potential, and the researchers report that tests to date have been promising. The full article in the August 2006 edition of *Environmental Health Perspectives* does make note of the potential for unrec-

ognized and emerging hazards as a consequence of work with nanoscale materials. Many are excited, however, about the possibility of a working substitute for a dangerous chemical, and the possibility that it may have even farther reaching implications, such as reduced need for post-plating grinding, machining, buffing, and hazardous waste disposal. Full article access available at the [Environmental Health Perspective web site](#).



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NCEH Conference

The 2006 Environmental Public Health Conference, presented by Centers for Disease Control's National Center for Environmental Health, will be held in Atlanta, December 4-6. The conference theme is "Advancing Environmental Public Health: Science, Practice, New Frontiers." For more information, see CDC's [NCEH web page](#).

Other Conferences and Tidbits

- [Georgia Safety, Health and Environmental Conference](#) (October 9-12, 2006; Gwinnett Center).
- Call for Abstracts for AIHce 2007; submissions due Oct. 3, 2006 by 5 pm. Three presentation formats: podium abstract, poster abstract, EHS crossover program. More info at [AIHA's web site](#).
- NEW eTool: Developed by OSHA and the Graphic Arts Coalition Alliance. "Flexography Module of Ergonomics in the Printing Industry"
- OSHA releases its Final Respiratory Standard on Assigned Protection Factors (APFs) in the [August 24 Federal Register](#).

New Human Study of Noise and Toluene Exposure Points to Increased Risk

Although there are numerous animal models illustrating how simultaneous exposure to noise and organic solvents—such as toluene—can result in an increase in hearing loss, the number of human and/or workplace studies have been both limited and inconclusive. Published in the August 2006 edition of the peer-reviewed journal *Environmental Health Perspectives*, a new study conducted in a Taiwan

adhesive factory found a strong correlation between hearing loss and simultaneous exposure to noise and toluene. The study included three study groups: workers exposed only to noise (ranging from 70-90 dBA), those exposed to noise and toluene, and administrative workers. The researchers collected air samples, noise measurements (both with a sound pressure level meter and through time-weighted averages),

information on lifestyle, common sociodemographic variables, and use of hearing protection. Despite a small sample size (n=174), the researchers found that toluene exposure appeared to increase the risk of hearing loss as much as six times when compared to noise-induced hearing loss alone. Full article access at the [Environmental Health Perspective web site](#).



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New Resources for Safety and Health Professionals: Have you heard?

Recently Developed Safety and Health Web Sites and Publications

- **The Cleaning Industry**
ISSA (the international trade association for the cleaning industry) and OSHA have signed a formal Alliance to promote the safety and health of workers in the cleaning industry. ISSA and OSHA plan to develop and distribute industry-specific health and safety resources, which include improved training materials, and may occasionally conduct complimentary workshops and seminars on various occupational safety and health topics. ISSA also created a new Web network dedicated exclusively to the protection of the health and safety of workers in the cleaning industry. It includes resources for employers with Hispanic workers,

information on consultation programs available to assist small businesses, and links to federal and state regulations. It also pulls together information relative to the cleaning industry, such as "Hazard Communication: Cleaning Chemicals in the Workplace," Bloodborne pathogens, PPE, and how to avoid Slips, Trips, and Falls. More information available at: <http://www.issa.com/osha/>

- **Concrete Industry**
From *OSHA's website*: "Concrete is one of the most widely used construction materials in the world. Safety issues exist in all phases of concrete production, including the manufacture of portland cement and pre-cast concrete products, as well as during the

use of concrete in construction. OSHA's Alliance Program and Strategic Partnership with the National Ready-Mix Concrete Association and was created to help improve safety and health for the manufacture of concrete and concrete products and for construction work with concrete."

The website contains links to a variety of PDF documents and guides providing details on the many hazards associated with several industry segments—such as block and brick manufacturing, ready-mixed concrete, and construction. There are even resources aimed at providing users guidance on how to develop and implement a Safety and Health Program.



President's Message

It is amazing how quickly time passes! In this my last Presidential message, I would like to thank the Executive Committee members for all of their hard work during the past year. I want to make special note of the contributions of Hilarie Schubert, who has been the person behind the scenes planning meetings and preparing the newsletter in addition to her responsibilities as Treasurer. The next time you see her please thank her for all of the hours she has put in to make our local section meetings exceptional in the past year. I would also like to welcome Peter Kowalski as President-Elect and

Steve Tochilin as First Year Director to the GLS AIHA Executive Committee.

It has been one year since Hurricane Katrina changed the face of the Southern coastline and five years since the attacks on September 11th. The rebuilding effort continues in Mississippi, Louisiana, and Florida and will do so for years to come. Unfortunately, the number of work-related fatalities in these areas has been rising, and they are primarily affecting construction workers. As health and safety professionals, we need to redouble our efforts to identify the hazards associated

with construction and look for new controls. Workers who so bravely served as first responders and disaster-site workers are now experiencing several work-related illnesses (see the article on page 1). The industrial hygiene profession is making invaluable contributions to protect the health and safety of our work force, and we are capable of doing even more.

The Youth Alliance, whose objective is to show young people their rights and responsibilities in the workplace, was created by OSHA, American Society of Safety Engineers (ASSE), Georgia Tech, *(continued on page 7)*

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the Georgia Department of Education, the Construction Education Foundation of Georgia (CEFGA), and your Georgia Local Section of AIHA. You can get more information about the details of the alliance [OSHA's Region 4 Alliances web page](#). Since the establishment of the Youth Alliance, we have completed an OSHA 10-Hour Construction course with approximately 70 students in the construction program at Maxwell High School of Technology in Lawrenceville. The next OSHA 10-Hour will be held at McEachern High School in Powder Springs. If you are interested in participating in this program, please contact me at michelle.dunham@gtri.gatech.edu. The topics typically covered in the course include an introduction to OSHA and information about scaffolding,

falls, welding, general health hazards, trenching, electrical safety, PPE, tool safety, and stairs and ladders.

There have been several recent developments regarding industrial hygiene and OSHA. The final respiratory standard on Assigned Protection Factors was published on August 24th, and publication of the Advance Notice of Proposed Rulemaking for public comment on the implementation of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) was September 12th. The recently appointed Assistant Secretary of Labor for OSHA, Mr. Edwin G. Foulke, will come to Georgia to speak at the [2006 Georgia Safety, Health, and Environmental Conference](#) at the Gwinnett Civic Center, October 10-12, 2006. Please plan on attending the conference and Mr.

Foulke's presentation.

In conclusion, I want to say that being President has been a rewarding and challenging experience. Volunteer service provides some of the best learning experiences and gives opportunities to meet really great people too. I will be leaving you in the very capable hands of Margaret Buckalew, and as I sign off, I ask for you as a past, present or future local section member to consider volunteering your time to our local section. You all have capabilities and experiences that would be welcomed and continue to make our local AIHA section great. Please feel free to contact any of the executive committee members with questions, comments, or suggestions.

—Michelle Dunham, MSPH, MSM

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Vendors Day 2006—Fisher Safety Reps Jerry Hammock and Don deHeus



Vendors Day 2006—MSA representative Mark Mackain entertains discussion from GLS members

Photos From Vendor's Day



Vendors Day 2006—Lynn Yocum, representative from SKC, describes the details of some new equipment with meeting attendees.

OSHA Assigned Protection Factors for Respirators Ruling

After much debate, OSHA published the final rule on APF's last month on August 24 (effective 22 November 2006). This long awaited ruling came out as many in the respiratory protection equipment business anticipated it would with a dual APF for hood/helmet style PAPRs and SARs (25 or 1000). The onus is on the manufacturer of such devices to prove a 1000 APF through studies in order to receive this rating. The wording in the standard is as follows;

The employer must have evidence provided by the respirator manufacturer that testing of these respirators demonstrates performance at a level of protection of 1,000 or greater to receive an APF

of 1,000. This level of performance can best be demonstrated by performing a WPF or SWPF study or equivalent testing. Absent such testing, all other PAPRs and SARs with helmets/hoods are to be treated as loose-fitting facepiece respirators, and receive an APF of 25.

Clay Miller of Bullard—one of our active GLS members and a consistent participant at our Vendor's Day events—presented on respiratory protection during our Fall 2005 Local Section meeting. During that meeting, Clay stressed the importance of 3rd party testing with respirator manufacturers. He submitted this update following the ruling as a perspective from the manufactur-

er's point-of-view:

"Bullard has always taken a proactive approach to APFs. We have been very active in conducting both WPF and SWPF studies dating back to the early 90's, well before the ORC Study and are confident that the bulk of our respiratory systems are able to achieve a 1000 APF as defined in the new rule. We believe that the information on these SWPF studies will suffice to meet the standards requirement for "evidence." We have gone through extensive testing to validate our APF of our respirators through independent testing facilities and are proud that Bullard has been ahead of the curve regarding this ruling."