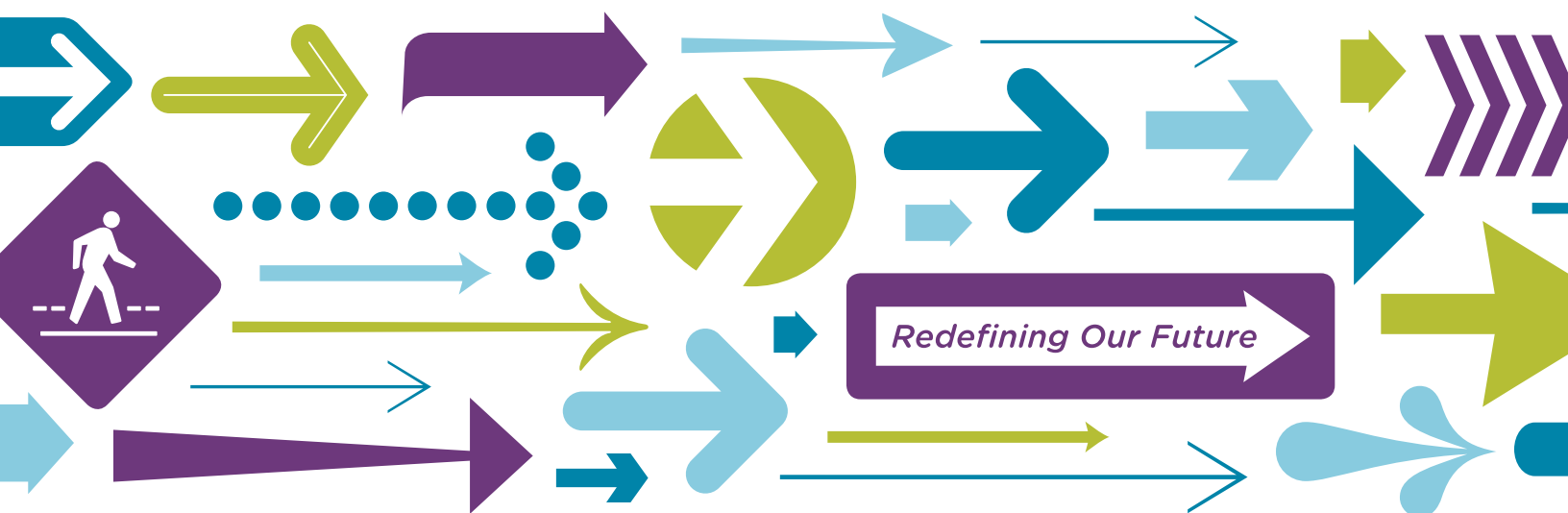




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# AIHce 2012

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Final Program

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**Firm-Grip, Explosion-Proof Casing**-ergonomically designed and non-slip, the pump body is also intrinsically safe.

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**Fail-Safe Piston Handle**-easy to pull handle locks into two positions (50 ml and 100 ml), denoted by clear alignment markings on the shaft and body for accurate and complete sampling.



**Thermal Ring**-displays ambient temperature allowing you to accurately correct detector tube readings for temperature on the spot.

**Flow Finish Indicator**-ensures precise sample volumes by displaying when a 50 ml or 100 ml stroke is complete.

**Inlet Clamping Nut**-easy and secure tube insertion that firmly holds Gastec Detector Tube for leak-proof sampling.

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**For over 40 years, the Gastec pump and Tube System has provided fast, simple and precise gas measurements and remains a clear leader in detector tube technology.**

### ■ BETTER TECHNOLOGY

Gastec offers a complete line of detector tubes for over 600 applications that includes over 375 single-stroke applications. No other manufacturer offers this number of single-stroke tubes or applications. The tubes are easy to read with clear lines of demarcation and only Nextteq offers an on-the-spot ambient temperature display.

### ■ BETTER QUALITY

No other manufacturer has more SEI-certified tubes than Gastec. With most applications requiring one stroke, there is less sampling time, less chance of errors, no miscalculated strokes and no miscompressions.

### ■ BETTER VALUE

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*Scan for additional information on Gastec pumps*



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This is the number of alarms generated by gas monitors on iNet® in 2011. These alarms, logged by iNet, warn hard-working people of potential danger in their workplaces. As this number continues to increase, so will the number of lives saved and people that can go home to their families at the end of each day.

To learn more about iNet from the Gas Detection People visit us at [www.indsci.com](http://www.indsci.com)

Visit our AIHce Booth #304



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| <input checked="" type="checkbox"/> <b>eLearning Courses</b>   | <input checked="" type="checkbox"/> <b>First Aid</b>            |
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| <input checked="" type="checkbox"/> <b>Nationwide Training</b> | <input checked="" type="checkbox"/> <b>Bloodborne Pathogens</b> |

**Visit our booth #1005 for more information.**  
**[www.heart.org/cpr](http://www.heart.org/cpr)**

# AIHce 2012

## Redefining Our Future



Welcome to AIHce 2012 and to Indianapolis! Get ready for a week of interactive sessions that will leave you equipped with ideas and solutions to take back and apply immediately on the job. AIHce 2012 is your opportunity to step back from everyday demands and focus on your most important asset — your professional development.

Enjoy more than 600 oral and poster abstract presentations, courses, lectures, roundtables, EHS crossover programs, lunch discussions, and exhibitor theater presentations addressing the latest professional issues, scientific topics, management trends, and innovative techniques.

### New at AIHce 2012!

- **AIHce Mobile App Debut. Keep AIHce at your fingertips with the new AIHce App!** Create and manage your schedule, view detailed session and exhibitor listings, and stay informed about the latest AIHce happenings — all from the convenience of your mobile device. Learn more on page 13.
- **IGNITE — “Enlighten Me, but Make it Quick!”** AIHce introduces a new educational experience — a series of short, fast-paced five-minute presentations. Hear what friends and colleagues have to share in this innovative and engaging new format. Attend an IGNITE session. Details on page 51.
- **Have a “Free Lunch” — on AIHce.** All full registrants received a coupon valued at \$10. Use the coupon to purchase lunch in the Expo on Tuesday, June 19. A variety of options are available. Browse the exhibits at your leisure and enjoy lunch — on AIHce!

**IF YOU HAVE ANY QUESTIONS DURING THE WEEK, STOP BY THE INFO KIOSK,  
OR ASK ANY AIHA STAFF MEMBER FOR ASSISTANCE. ENJOY YOUR WEEK!**

Over  
**50**  
educational  
contact  
hours

**57**  
PDCs



**50 topic areas**

**1000s** of attendees

**100+**  
technical sessions

**300+**  
exhibitors

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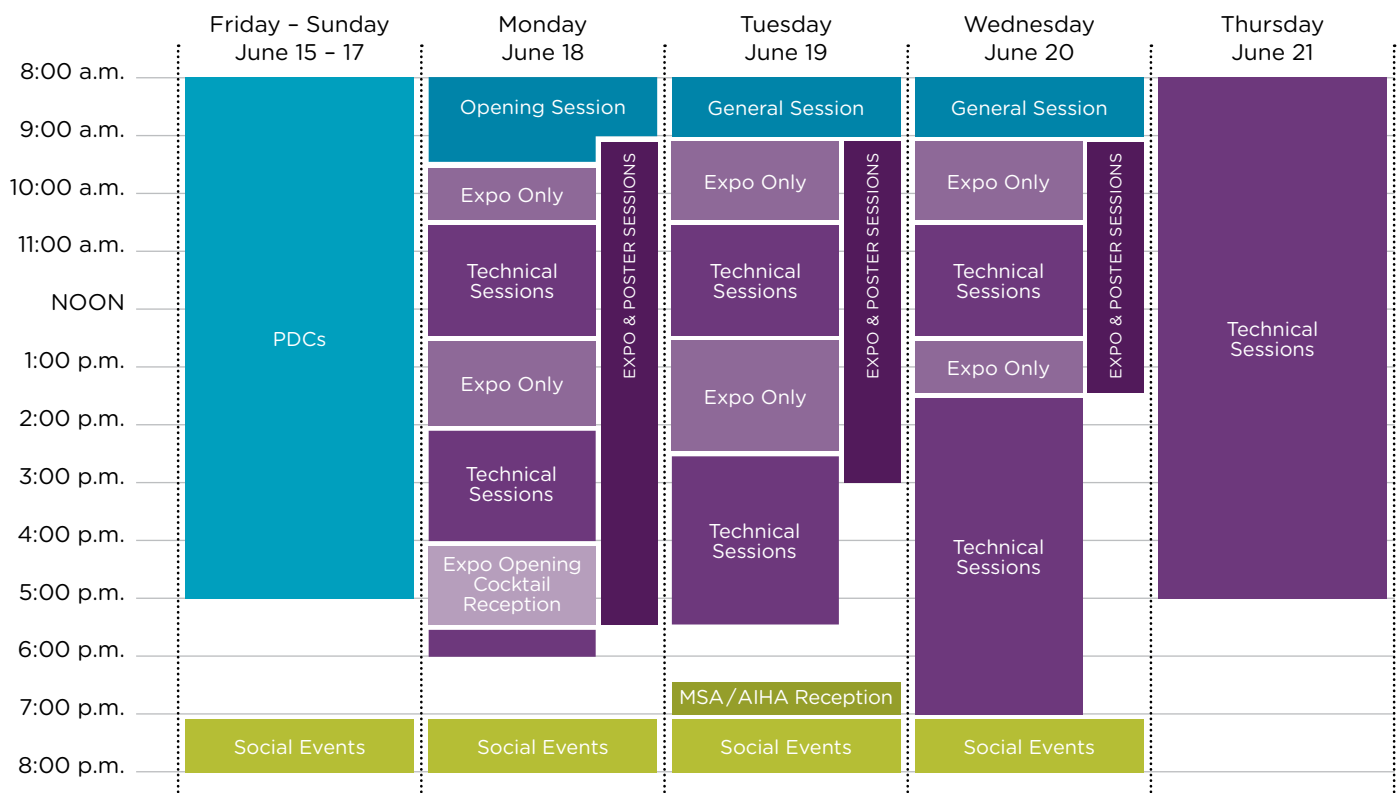
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# AIHce 2012

Redefining Our Future 

# » AIHce at a Glance





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## Thank You ...

to the following volunteers for their time and expertise in assembling the 2012 program.

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### Personnel

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### Promotion

Beau Middaugh

### Technical Tours

Consuelo Davis, CIH

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The LCC, in partnership with AIHA, works to organize and execute an outstanding AIHce. A special thanks to all who donated their time throughout the year to make this year's conference memorable.



## AIHA® Board of Directors

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**AIHce 2012** is headquartered at the Indiana Convention Center (ICC). Most committee meetings and evening social activities are located at the JW Marriott, the headquarters hotel.

### AIHce Information

ICC, Wabash Lobby » 317-262-8500

Need assistance? Stop by the information kiosk; AIHce staff is happy to help.

### ICC Concierge

ICC, Crossroads Lobby

Looking for a restaurant? Directions to the NCAA? Visit the concierge for assistance with sightseeing activities, shopping options and restaurant reservations.

### AIHce On Demand

Reach your educational goals using conference recordings from AIHce 2012. AIHce On Demand offers the following, available online 24/7:

- Presentation slides synched to audio recordings
- Downloadable MP3 files and abstract presentations
- Up to 250 hours of recorded educational content

Stop by the AIHce On Demand counter in Registration to purchase the complete library of sessions. Pay just \$75 through the end of the conference. After AIHce, the price increases to \$195.

*\*If you registered at the Best Value or Premium rate in advance, AIHce On Demand is included — no need to purchase.*

AIHce On Demand is brought to you by  
Scott Safety



### Airport Transportation

#### Taxis

The 15-minute ride between the airport and downtown Indianapolis is approximately \$30 in metered taxis.

#### City Bus Service



IndyGo's Green Line Downtown/Airport Express route provides non-stop service between the airport and major downtown hotels and the Indiana Convention

Center. Green Line service runs daily from 5:00 a.m. – 9:00 p.m. The cost is \$7, one-way trip. Visit [www.indygo.net](http://www.indygo.net) or call 317-635-3344.

### MORE CMs!

You can now earn COCs and CEUs for weekday technical sessions! Simply complete the online survey at: [www.aihce2012.org/certification](http://www.aihce2012.org/certification).

### AIHA® International Reception

Each year, AIHA welcomes registrants from around the world. International professional members are invited to join other international colleagues on Monday night. Admission by invitation; international badge required.

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### Expo Highlights

ICC, Halls A-E

Monday	9:00 a.m. – 5:30 p.m.
Tuesday	9:00 a.m. – 3:00 p.m.
Wednesday	9:00 a.m. – 1:30 p.m.

It's all happening at the Expo — the place to browse more than 300 exhibits, relax, dine and meet with colleagues. Each day features Expo-only hours affording time in the Expo between sessions.

- Expo Theater
- FREE Lunch in the Expo on Tuesday — use your voucher at any concession in the center
- Clandestine Drug Lab Exhibit
- Expo Opening Cocktail Reception — don't forget your drink ticket
- Passport to Prizes + Daily Prize Drawings
- Cyber Cafe + Networking Lounges
- Web and Software Showcase
- University Row
- Technical and Student Posters
- Luncheon Discussions
- Restaurants

### AIHA® and ACGIH®

#### AIHA, Booth 922

*It's all happening at AIHA!*

Take advantage of 15% off all AIHA publications and education, including these new titles debuting at AIHce:

- Engineering Reference Manual, 3rd edition
- 2012 ERPG/WEEL Handbook
- 2012 ERPG Update Set
- 2012 Emergency Response Guidebook

Don't want to carry heavy books around? Have your purchases shipped — FOR FREE!

#### Plus

- Learn more about the Product Stewardship & Sustainability Network;
- Find out if you're a dart-throwing monkey;
- Experience the convenience and portability of PDF publications;
- Take a sneak-peek at upcoming AIHA conferences;
- ...And much more!

### The ACGIH® Pavilion Booth 938

Staff will demonstrate how ACGIH® defines the science of occupational and environmental health by showcasing the member benefits, outstanding publications and software, and upcoming educational events for which ACGIH® is renowned. Information regarding The Action Level®, our at-home, self-study continuing education course, the Foundation for Occupational Health and Safety (FOHS), and the Foundation's Sustainable TLV®/BEI® Program will be available. Please stop by and see us.

### Poster Sessions

ICC, Hall B

More than 100 technical and student papers present the latest findings in OEHS. Posters are displayed 9:00 a.m., Monday, through 1:00 p.m., Wednesday, during the Expo hours. Technical Session authors present their research on Monday and Tuesday. Student authors present on Wednesday. See p. 72.

### NEW! Student Posters Award Ceremony

Wednesday, 12:30 p.m. – 1:00 p.m.

AIHA Volunteer Groups will present awards to Student Posters.

### Luncheon Discussions

ICC, Hall B

Luncheon Discussions are small conversational groups facilitated by AIHA Members and NIOSH researchers and technical staff. Discussions focus on current issues, trends, relevant topics and research. Purchase lunch from a concession and choose your discussion. Seating is limited and available first-come, first-served.

- **Product Stewards**  
Monday, 1:00 p.m. – 2:00 p.m.
- **Student and Early Career Professionals**  
Monday, 1:00 p.m. – 2:00 p.m.
- **NIOSH Tech Talks: Current Topics**  
Tuesday, 12:30 p.m. – 1:30 p.m.
- **Volunteer Group Tech Talks**  
Wednesday, Noon – 1:00 p.m.

### 26th Annual AIHF Fun Run/ Walk

Tuesday, 6:30 a.m. – 8:00 a.m.

Meet at the JW Marriott; Event Entrance, Level 1

Lace up your running shoes and support the work of the AIHF. Run 5K or walk 2K — all are welcome! New and advance registered participants must stop by Registration to check in and sign a waiver by 5:30 p.m. on Monday. The on-site fee is \$40. No check in or new registrations accepted at the race site.

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Company



## AIHce Pin



Add bling to your badge and support the AIHF by purchasing the AIHce 2012 pin at the AIHA Booth, AIHF Fun Run Registration or the Volunteer Collaboration Café.

## Annual Blood Drive

ICC, 110

Monday–Tuesday 9:00 a.m.–2:00 p.m.

Wednesday 9:00 a.m.–1:00 p.m.

Although walk-ins are welcome, you are encouraged to make an appointment early in the day to reduce the wait time. Cash prizes of \$100, \$50 and \$25, will be awarded randomly each day; be sure to swipe your Expocard at the door. A special Grand Prize will be awarded if total pints collected exceed 129 – the all-time high.

Sponsored by AIHA's LCC and administered by the Indiana Blood Center



## Business Centers

ICC, opposite room 116

T: 317-262-4496; F: 317-262-4435

Email: ikonbusinesscenter@icclos.com

Monday–Friday, 9:00 a.m.–5:00 p.m.

Office supplies, shipping, fax, copy and print.

JW Marriott–FedEx Office

T: 317-974-0378; F: 317-974-0521

Email: usa5527@fedex.com

Monday–Friday 7:00 a.m.–7:00 p.m.

Saturday–Sunday 9:00 a.m.–5:00 p.m.

Full service FedEx Office offering supplies, shipping, fax, copy and print.

## CareerAdvantage Development Fair 2012

ICC, 105 » 317-262-8505

Monday–Wednesday,  
8:00 a.m.–4:00 p.m.

For those registrants actively seeking employment, the *CareerAdvantage* Development Fair has always been the place to search and apply for open OEHS positions online. Even if you aren't currently looking for a new job, you'll want to increase your marketability as a job candidate for the future. See page 16 for the list of scheduled events.

If you are an employer seeking to fill an open position, stop by and post your job online; candidates will be able to view your position immediately. You can also search through online resumes and select from hundreds of qualified OEHS professionals.

## Children

Children and young adults 18 and under are not permitted in courses or in the Expo during move-in/move-out. If accompanied by an adult, children are permitted in the Expo during regular hours. A name badge is required and will be provided at no cost.

## Messages

ICC, Expo, Wabash Lobby, 2nd floor

Saturday Noon–5:00 p.m.

(Wabash lobby only)

Sunday–Wednesday 7:00 a.m.–5:30 p.m.

Stay in touch with home and office, see who is registered for AIHce or peruse the AIHce website. Complimentary messaging and Internet access is available.

## First Aid and Assistance

ICC, Crossroads Lobby

A first aid station is staffed daily, Saturday through Thursday.

## Lost and Found

Information Kiosk, Wabash Lobby

Kindly bring articles left behind in meeting rooms or the Expo to the Kiosk. Items will be turned over to ICC security at the end of each day.

## MSA/AIHA® Reception

Everyone who is anyone will be at this must-attend annual event on Tuesday at 6:30 p.m., Grand Ballroom 5 at the JW Marriott.

Jointly sponsored by  
AIHA® and MSA®



## Press Room

ICC, 112

Monday–Tuesday 7:30 a.m.–5:00 p.m.

Wednesday 7:30 a.m.–3:00 p.m.

Members of the media are invited to register for AIHce in the Press Room; proper credentials required. The press room offers exhibitor media kits, Internet connections and areas to network and conduct interviews.



## New! AIHce Mobile App Help Desk

ICC, Wabash Lobby

Sunday

2:30 p.m.–6:00 p.m.

Monday–Tuesday

9:00 a.m.–5:30 p.m.

Questions about the AIHce mobile app? Knowledgeable staff are ready to help!

## Educational Transcripts/ Attendance and Certification Documentation

- Full attendance and participation is required; partial credits will not be awarded.
- Details on all certification information and contact hours will be available via educational transcripts on **August 27, 2012**.
- Educational transcripts are free and available 24/7 at [www.aiha.org/EduTranscript](http://www.aiha.org/EduTranscript)
- A \$50 replacement fee will be charged for attendance documentation prior to 2010. See [www.aiha.org/CMReplacement](http://www.aiha.org/CMReplacement) for further information.
- Presenters, co-presenters, authors of oral, abstracts, technical sessions and poster presentations:
  - Are responsible for retaining all documentation for reference and/or certification audits
  - Certification information and contact hours will NOT appear on their transcripts.
  - MUST retain one of the following: the web posting, advance program, or final program, reflecting their role.
- Questions contact: Stacey Talbot, Manager, Knowledge Programs and Product Development [stalbot@aiha.org](mailto:stalbot@aiha.org).

## Certification Information

Go to [www.AIHce2012.org/Certification](http://www.AIHce2012.org/Certification) for complete information on credits\* and/or contact hours for maintaining certifications (U.S., Canadian, and International).



BCRSP



\* Per the 2007 ANSI/ IACET Standard for Continuing Education and Training, a brief survey is required for individuals seeking COCs/CEUs for AIHce's technical weekday program.



## Guest Program

All registered spouses and guests are invited to attend the Welcome Brunch — A Hoosier Hello on Monday at 10:00 a.m. at the JW Marriott. See who is attending AIHce and meet old friends at this annual event. Learn what Indianapolis has to offer and get tips on what to do and what to see during your stay.

Following brunch, join us for *Indianapolis Indeed!* — a city tour with stops at the famous Indianapolis Motor Speedway and President Benjamin Harrison's home. This introduction to "Circle City" is a great way to spend the afternoon. The tour departs the JW Marriott, Event Entrance on Level 1 at 12:30 p.m. and returns at 5:30 p.m.

These events are included in the family member/non-IH guest registration fee and admittance is open only to registered spouses or guests. Tickets are required for both activities.

## Mary Kay Day

You deserve a little pampering! Mary Kay Cosmetics will host a special hospitality suite at the JW Marriott, room 312. A wide range of services will be offered — skin care, color cosmetics, makeovers, color analysis and more. The hospitality suite is open Tuesday, 10:00 a.m. – Noon. A Mary Kay representative will attend the Welcome Brunch on Monday to register interested participants in advance. Space is limited, so be sure to sign up! Based on demand, the program may be repeated on Wednesday. Look for details in the hospitality suite.



Mary Kay services are offered at no charge; no minimum purchase required.

## New! Paperless Evaluations

PDC and technical session evaluations are now paperless. Use your smartphone, laptop, iPad or mobile device, or the cyber center computers to access the evaluations one of three ways –

- The AIHce Mobile App. Visit <http://crwd.cc/aihce2012> or scan the QR code
- Log on to [www.aihce2012.org/certification](http://www.aihce2012.org/certification)
- Links sent via email at the conclusion of your PDC and Technical Session

Questions? Visit the Speaker Ready Room, ICC, 108



## Registration

ICC, Wabash Lobby » 317-262-8502

Friday	5:00 p.m. – 7:00 p.m.
Saturday–Monday	7:00 a.m. – 5:30 p.m.
Tuesday	7:30 a.m. – 5:30 p.m.
Wednesday	7:30 a.m. – 4:00 p.m.
Thursday	7:30 a.m. – 10:30 a.m.

To register as a member, individuals must have satisfied all the requirements of membership and paid 2012 dues in full prior to AIHce.

Registrants must wear name badges to be admitted to AIHce sessions and events. Courses, tours, AIHF activities and selected social activities require a ticket. Once tickets are purchased, fees are not refundable however, ticket exchanges may be permitted.

After one initial re-print, there is a \$5.00 charge for lost badge, ticket or Expocard replacement.

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## PDCs

All courses are located in the Convention Center.

To access electronic handouts go to [www.aiha.org/eMats](http://www.aiha.org/eMats). If in need of assistance, please stop by the Speaker Ready Room, ICC, 108.

## PDC Luncheons

For your convenience, a boxed lunch is included with all PDCs. Lunch will be served in Hall A, Noon – 1:00 p.m. A ticket is required.

Sponsored by CTEH



## Speaker Ready Room

ICC, 108 » 317-262-8502

Saturday–Tuesday	7:30 a.m. – 11:30 a.m. and 12:30 p.m. – 5:30 p.m.
Wednesday	7:30 a.m. – 11:30 a.m. and 12:30 p.m. – 6:30 p.m.
Thursday	7:00 a.m. – 11:30 a.m. and 12:30 p.m. – 4:30 p.m.

**Check in is mandatory** for all Podium, Roundtable, Symposium and Crossover presenters and moderators and monitors\*. Visit the Ready Room at least 60 minutes prior to the start of the session.

**Presenters are required to confirm recording permissions and to meet with an audiovisual technician.**

- Presentations may be uploaded in the session room only after testing in the Speaker Ready Room. Please bring your presentation(s) on a thumb drive or other electronic media device.
- Only AIHce-supplied computers may be used in technical sessions.

\* PDC instructors are welcome to use the room, but not required to check in. AIHA does not provide computers to course instructors.

## Student and Early Career Professionals

AIHce programs and activities of interest to those who are new to the profession, or just starting their careers, have been gleaned into a single program of events. See page 15. Future Leaders and Young Members won't want to miss the annual get-together on Sunday night at the Cadillac Ranch: An American Bar and Grill.

Sunday night event sponsored by 3M



## Technical Tours

Depart ICC, Maryland Street Entrance

Participants should assemble at the Maryland Avenue Entrance 15 minutes prior to the published time of departure. If you are interested in a specific tour, check at Registration to see if tickets are available.

## Volunteer Collaboration Café

ICC, Crossroads Lobby

Sunday–Wednesday, 7:30 a.m. – 4:00 p.m.

Stop by the Volunteer Collaboration Café to update your AIHA profile, watch an IH-related movie, attend a special session, or find out more about AIHA membership and volunteer opportunities. See page 17.

## New! Volunteer Red Carpet Club

ICC, 111

Monday–Wednesday, 9:00 a.m. – 4:00 p.m.

AIHA loves its volunteers, both national and local! To show its appreciation, AIHA is providing an exclusive, members-only lounge where AIHA volunteers can enjoy a little downtime. Tuesday has been designated as official "Volunteer Appreciation Day."

## New! WiFi

Wireless internet access is available throughout the Convention Center. On your laptop, click "view available networks" and select AIHce 2012. It's that simple.

Complete session evaluations, at your convenience, keep in touch with work, and check email using your laptop. Several laptop lounges are located in the center.

Courtesy of Scientific Analytical Institute.



# HOTEL GUIDE



1

**JW Marriott**  
AIHce Headquarters  
Hotel  
10 S. West St.



2 Canterbury Hotel | 123 S. Illinois St.

3 Comfort Suites | 515 S. West St.

4 Conrad Hotel | 50 W. Washington St.

5 Crowne Plaza | 123 W. Louisiana St.

6 Embassy Suites | 110 W. Washington St.

7 Hampton Inn | 105 S. Meridian St.

8 Hilton Garden Inn | 10 E. Market St.

9 Hilton Hotel and Suites | 120 W. Market St.

10 Holiday Inn Express Suites | 410 S. Missouri St.

11 Homewood Suites by Hilton | 211 S. Meridian St.

12 Hyatt Regency | One S. Capitol Ave.

13 Marriott Downtown | 350 W. Maryland St.

14 Marriott Courtyard | 601 W. Washington St.

15 Marriott Fairfield Inn & Suites | 501 W. Washington St.

16 Marriott Springhill Suites | 601 W. Washington St.

17 Omni Severin Hotel | 40 W. Jackson Place

18 Sheraton Hotel | 31 W. Ohio St.

19 Staybridge Suites | 535 S. West St.

20 The Westin | 50 S. Capitol Ave.

## ON ALL TOURS

...to ensure admittance to the tour site, carry valid government-issued photo identification, i.e., driver's license, passport, or military ID. Personal electronics (cameras, iPods, cell phones with photographic capability, and other like items) may not be used during the tour. Briefcases, backpacks, and totes are discouraged. Limited jewelry and appropriate attire, including long pants (men and women), long-sleeved shirts, and flat, closed sturdy walking shoes are a must!

Additional restrictions, if applicable, are listed in each tour description.



Board bus fifteen minutes prior to scheduled departure from the ICC, Maryland Entrance. Tickets are nonrefundable.

## Monday, June 18

**Sold Out**

### TT-01 Eli Lilly & Company

1:30 p.m. - 4:30 p.m.

Driver's license required. Safety glasses provided.

## Tuesday, June 19

**Sold Out**

### TT-02 Covanta Indianapolis, Inc. (Tour 1)

9:30 a.m. - 11:30 a.m.

Long-sleeved shirt, slacks, and durable flat-soled shoes required. Hard hat, safety glasses, and hearing protection provided.

### TT-02A Indianapolis Motor Speedway

9:30 a.m. - 12:30 p.m.

**\$35**

The Indianapolis 500 is the world's most famous auto race and the world's largest single-day spectator sporting event, attracting over 200,000 spectators. The "500" has been "Redefining the Future" since its inception in 1911.

Although racing is inherently risky, the protection of drivers, crews and spectators is of paramount importance. Go behind the scenes at the Indianapolis Motor Speedway (IMS) to explore some of the OEHS, security and medical aspects of IMS operations. Subject matter may include crash protection (vehicle and wall designs), fire protection, personal protective equipment, hearing conservation, medical services, security and emergency preparedness, hazardous materials and waste management.

*Note: Specific topics and speakers are subject to change.*

**Sold Out**

### TT-03 Roche Diagnostics

9:30 a.m. - 1:00 p.m.

No open-toed or open-heeled shoes; some walking and stair climbing required.

**Sold Out**

### TT-04 Covanta Indianapolis, Inc. (Tour 2)

1:30 p.m. - 3:30 p.m.

Long-sleeved shirt, slacks, and durable flat-soled shoes required. Hard hat, safety glasses and hearing protection provided.

**Sold Out**

### TT-05 Dow AgroSciences LLC

1:30 p.m. - 4:30 p.m.

Participants are required to have completed admittance forms in advance. These forms were e-mailed in May. Safety glasses and lab coats provided. Considerable walking and standing. Possible exposure to plant pollens.

**SAVE THE DATE! Registration opens in December.**

# AIHce 2013

MONTREAL, CANADA

MAY 18-23 | [AIHce2013.ORG](http://AIHce2013.ORG)

THE PREMIER CONFERENCE AND  
EXPO FOR OEHS PROFESSIONALS

the  
art + science  
of professional  
judgement



CO-SPONSORED BY  
AIHA & ACGIH





# New! AIHce 2012 Mobile App

Available for iPhone, iPad, Android and Blackberry  
<http://crwd.cc/aihce2012>

## Build Your Conference Schedule

Tap the bookmark to easily add any session or activity to Your Favorites.

## View Sessions, Exhibitors, Speakers and More

View information on speakers, educational sessions, special events and exhibitors with a single tap!

## Evaluate Session

Tap a link inside the session you want to evaluate and go to the survey.

## Add Your Contact Info — Networking Made Simple!

Share your contact information with other attendees by completing the Contacts screen. You can then select the person with whom you'd like to share your information. In Your Contacts, you can see who has shared their information with you. *\*Your information is only accessible to those you have shared it with.*

## Find Your Way Around

Launch Maps by tapping a room name or an exhibitor's booth number. The yellow dot will show you other activities happening there and when they are scheduled. Maps will also find local amenities and locations around the venue. To view more details, tap the pin in the top right corner and select a location.

## Stay in the Know

Receive real-time messages and alerts by enabling push notifications during setup.

## Spread the Word

Use the Tell Your Friends button to email your friends about the app.



**Still have questions? Visit the Mobile App Help Desk, ICC, Wabash Lobby.**

Sunday, 2:30 p.m.–6:00 p.m.

Monday and Tuesday, 9:00 a.m.–5:30 p.m.



## New Technology Tools at AIHce!

### Introducing the AIHce Mobile App!

Use with iPhones, iPads, Androids and Blackberries! View and evaluate sessions and speakers. Explore the Expo. Search for events and activities. Build your conference schedule. Navigate the convention center and the JW Marriott. Connect with other conference-goers. Visit <http://crwd.cc/aihce2012> or scan the QR code.



### Text to Win an iPad! Four Chances to Win!

While visiting the Expo, find the four Text-to-Win stations in the Expo. At each location, text the word on the sign to 68398. You can only enter once at each location, but by visiting all four locations, you'll increase your chance of winning. One iPad per person. Winners will be notified by text on Tuesday evening, and you'll take your iPad home with you.

*The fine print — Msg&Data rates may apply.* You will receive one confirmation text message for each text sent; each winner will receive one text. Phone numbers will not be saved or used again. To opt-out, text STOP to 68398. Only one entry per mobile phone per location.



### IH Calculator – Debuting at AIHce!

Developed by an AIHA project team and a student development team from Arizona State University for Apple mobile devices (cell phones and tablets), this app can be used by professionals performing industrial hygiene calculations. The app allows occupational health and safety professionals to view common formulas and conversions on a mobile device and populate the formulas' fields to calculate results. The app provides a more time efficient and convenient tool to the industrial hygienist. Go to the Apple App Store and search for **AIHA IH Calculator**. For questions or comments about the app, e-mail [aihaapp@aiha.org](mailto:aihaapp@aiha.org).

### Smart Apps for Smart People Thursday, June 21

8:30 a.m.-10:00 a.m. » ICC, Volunteer Collaboration Café Drop by this App Open House to share, collaborate, or learn how to bump, download and swipe your way to better use of your favorite smart phone or tablet. Bring your device, learn from your peers and share your favorites in this loosely-structured, hands-on session.

### Stay Connected!

Complimentary Wi-Fi is provided throughout the convention center. Wi-Fi courtesy of Scientific Analytical Institute.



## Future Leaders and Young Member Reception

(by invitation)

Sponsored by 3M



Sunday, June 17, 7:00 p.m.–10:00 p.m.  
Cadillac Ranch

39 West Jackson Place, Union Station

Have you been a part of the Future Leaders Institute or are you a student attending AIHce? If so, attend the Future Leaders and Young Member Reception to socialize with your peers and to meet new people.

## Students and Early Career Professionals Track

The following technical sessions were assembled for students and those new to the profession.

Monday, June 18,

10:30 a.m.–1:00 p.m. » ICC, 102

RT 204 Oh, the Places You'll Go! Perspectives on IH Career Paths

Sponsored by the Students & Early Career Professionals Committee

Monday, June 18,

2:00 p.m.–5:00 p.m. » ICC, 102

RT 210 Perspectives of Preparation for the CIH Exam v 6.0

Sponsored by the Students & Early Career Professionals Committee

Wednesday, June 20,

1:30 p.m.–4:30 p.m. » ICC, 243

RT 231 The Future of EHS: Past to Present

Wednesday, June 20,

1:30 p.m.–4:30 p.m. » ICC, 102

RT 232 The Next Generation of Technical Leaders: IH Student Research Showcase

## Volunteer Collaboration Café

Sunday, June 17–Wednesday, June 20

ICC, Crossroads Lobby

Need a place to relax for a few minutes or to meet with peers? Visit the Collaboration Café — a multipurpose area where you can relax, network with colleagues and seasoned professionals, and attend complimentary special events. See page 17 for a complete list of activities at the Collaboration Café.

## CareerAdvantage Development Fair 2012

Monday, June 18–Wednesday, June 20  
ICC, 105

Sponsored by the AIHA Career and Employment Services Committee, the Fair offers sessions designed to help those in the OEHS field advance their current career and find and maintain positions in the industry. The CareerAdvantage Development Fair also provides an opportunity for employers and professionals to socialize and make important contacts. See page 16 for information.

## Student & Early Career Professionals Luncheon Discussions

Monday, June 18,

1:00 p.m.–2:00 p.m. » ICC, Expo, Hall B

Designed specifically for students and early career professionals, AIHA members lead informal discussions on a variety of topics, including career goals, certification, volunteering, and more! Seating is available first-come, first-served.

## Mentoring Program Networking Event

Sponsored by the Students & Early Career Professionals Committee

Monday, June 18, 6:00 p.m.–8:00 p.m.

Indianapolis Colts Grille,

110 W. Washington Street

Join us at the Mentoring Program's 2nd Annual Networking Event! This event is open to all participating members of AIHA's Mentoring Program, and to students and professionals interested in being a mentor or having a mentor. The AIHA Mentoring Program is an excellent way to get involved in the community, to build your network, and to support the development of another professional!

## AIHF Fun Run/Walk

Sponsored by  
Eli Lilly and Company



Tuesday, June 19, 6:30 a.m.

White River State Park

Lace up your tennis shoes and support the work of the American Industrial Hygiene Foundation. The event is open to everyone from serious runners to recreational walkers. All participants must stop by Registration in the Convention Center to sign a waiver, obtain a race number, and pick up the official T-shirt. On-site registration is complimentary to students; \$40 for non-students. Register by 5:30 p.m. on Monday. Registrations will not be accepted at the race site.

## Student Local Sections Council Business Meeting

Tuesday, June 19, 11:00 a.m.–1:00 p.m.

JW Marriott, White River Ballroom B

Meet other student local section officers and share best practices. Students interested in forming a student section at their school are encouraged to attend.

## Students and Early Career Professionals Committee Meeting

Tuesday, June 19, 1:00 p.m.–3:00 p.m.

JW Marriott, White River Ballroom D

Interact with members of the SECP Committee. Discuss current and new projects focused on developing outreach materials and providing students and early career industrial hygienists with mentoring. New volunteers, including students, are encouraged to attend.

## AIHA Volunteer Group Meetings

Monday, June 18–Wednesday, June 20

These are not closed door meetings! AIHA has more than 45 volunteer groups that focus on a variety of technical topics, and several that address student needs. Unless otherwise noted, volunteer group meetings are open to all. See page 22 for meeting times and locations.

## Student Poster Session

Wednesday, June 20

10:00 a.m.–Noon » ICC, Expo, Hall B

Students discuss their scientific research at the 22<sup>nd</sup> Annual Student Poster Session. Two posters will be selected "Best of Session" and recognized at the new Student Posters Award Ceremony, 12:30 p.m.–1:00 p.m. Student awards given by AIHA Volunteer Groups will also be presented at this ceremony.

## IGNITE

### Offering Enlightenment and Knowledge — In a Hurry!

Tuesday, June 19, 2:30 p.m.–4:00 p.m. » ICC, 209

Moderator: M. Latko, AIHA, Falls Church, VA.

Arranger and Monitor: C. Tobin, AIHA, Falls Church, VA.

The IGNITE session originated in the high-technology profession but has spread worldwide. In a five-minute presentation, speakers share their professional and personal passions using 20 slides that auto advance every 15 seconds. AIHce 2012 is offering its own version of IGNITE. Learn what's on the minds of your colleagues and friends in this innovative and engaging new format. Find out why this new program has become an international phenomenon. Experience firsthand what is meant by the IGNITE motto, "Enlighten us, but make it fast!"

See page 51 for presentation listing.







# CareerAdvantage 2012

## Development Fair

### at AIHce 2012

Indiana Convention Center, 105

**Check out the popular learning events happening at Development Fair 2012!**

**Monday, June 18–Wednesday, June 20, 8:00 a.m.–4:00 p.m.**

#### Résumé Critiquing

**Monday, June 18**

8:00 a.m.–9:00 a.m.; 11:00 a.m.–Noon  
and 3:00 p.m.–4:00 p.m.

**Tuesday, June 19**

8:00 a.m.–9:00 a.m. and 11:00 a.m.–Noon

**Wednesday, June 20**

9:00 a.m.–Noon and 1:00 p.m.–3:00 p.m.

Bring your résumé to the Development Fair to sign up for your résumé critiquing session with an experienced hiring director. You will get helpful feedback directly related to style, length, focus, use of accomplishments and keywords, and more.

#### Everyone Is a Consultant

**Monday, June 18, 9:30 a.m.–10:30 a.m.**

Thomas Blank, CIH, CSP

Kevin Roegner, MPH, CIH

Gain insight on how to determine whether a consulting practice is for you, how to establish a consulting business, practical matters for beginning a consulting practice, and overcoming various obstacles.

#### Using Social Media as a Networking Tool

**Monday, June 18, 1:30 p.m.–2:00 p.m.**

Mary Ellen Brennan, SPHR

Craig Sorrell, Collaborative Projects

Sometimes, it's not what you know, but who you know—right? The role of networking is undeniably important in the job search. Learn how to use social media to enhance networking in your job search.

#### Questions You Wanted to Ask, But Were Afraid To

**Monday, June 18, 2:15 p.m.–2:45 p.m.**

Mary Ellen Brennan, SPHR

What's the salary for this job? How many hours will I have to work? Questions like this can jeopardize the success of your interview, but how does the job seeker find out if the job is a good fit? Find out what you should and shouldn't ask and other ways to get the information you need about a potential opportunity—from the employer's view.

#### Interviewing Do's and Don'ts—Live Interview and Critique

**Tuesday, June 19, 9:30 a.m.–10:30 a.m.**

Mary Ellen Brennan, SPHR

Richard Prodans, CIH, CSP

Isabel Zuclich, IH

Members of the Career and Employment Services Committee (CES) and AIHA's Human Resources Director will stage and manage several mock job interviews to provide attendees with the Do's and

Don'ts of interviewing in today's professional workplace. This seminar will give attendees an interactive experience where they can observe and discuss interviewing styles as well as potential obstacles. Attendees will gain practical tools and experience to utilize when looking for a new opportunity.

#### Get Your Résumé Noticed

**Tuesday, June 19, 1:30 p.m.–2:00 p.m.**

Laurie Corsi, CIH

Gain insight on how to get your résumé noticed by an employer. You already know you're competing with more applicants than ever before, so you have one chance for an employer to review your résumé and decide to give you a call. This seminar will provide an overview of the Do's and Don'ts of résumé writing to ensure you get that call.

#### Phone Interview Etiquette

**Tuesday, June 19, 2:15 p.m.–2:45 p.m.**

Sharon Sperber, CIH

Phone interview etiquette is just as important as in-person interview etiquette because when it comes to getting hired, regardless of how you interview, a successful meeting will get you to the next stage of the hiring process.

While you're actively job searching, it's important to be prepared at a moment's notice for a phone interview. You never know when a recruiter or a networking contact might call and ask if you have a few minutes to talk.

#### Speed Networking

**Tuesday, June 19, 3:00 p.m.–4:00 p.m.**

Bring plenty of business cards and be ready to meet with colleagues from all levels and industries – you will make more contacts in a shorter time.



## Employers!

It's not too late to post your open positions using the Development Fair package. Stop by to quickly post your jobs online so candidates can view them immediately. You can also search through online résumés and select from over one thousand qualified OEHS professionals. Visit the staff at the Development Fair today to find out more.

## Discover the Volunteer Collaboration Café

ICC, Crossroads Lobby

Explore our interactive volunteer display and learn how you can benefit by being part of AIHA's dynamic volunteer experience. Stop by and review the many events offered at the café via our daily specials. These specials will expand your volunteering horizon.

### Sunday, June 17

7:30 a.m.–4:00 p.m.

2:00 p.m.–3:00 p.m.

Student Meet and Greet

Before the start of AIHce, connect with other AIHA student members.

### Monday, June 18

7:30 a.m.–4:00 p.m.

*Focus on the Future: Come and learn how becoming involved with AIHA, both locally and nationally, can help move your career and the future of the profession.*

9:00 a.m.–9:30 a.m. » **Join the Club: How to Be Involved with AIHA Volunteer Groups**

Learn how you can make a difference by volunteering with AIHA's Volunteer Groups.

10:00 a.m. » **Missed the Opening Session?**

Monday's Opening Session to be replayed throughout the day!

10:30 a.m.–11:00 a.m. » **Student Exchange**

A great opportunity for students to meet new friends or catch up with old ones.

11:00 a.m.–11:30 a.m. » **Giving Back — Mentoring Program**

Are you interested in being or finding a mentor? If so, stop by and sign up.

11:30 a.m.–Noon » **SharePoint Tutorial**

SharePoint Communities are private communities where groups can collaborate on projects, have discussions, create their own Wiki pages, organize a group calendar, and assign tasks to group members. That sounds great, but how do you use all of that? Learn some tips, tricks, and a general how-to from Craig Sorrell.

1:00 p.m.–2:00 p.m. » **Movie: Inside Japan's Nuclear Meltdown**

View the PBS FRONTLINE investigative report from the perspective of workers and government officials involved in the 2011 nuclear meltdown at Japan's Fukushima Daiichi nuclear complex after the 9.0 magnitude earthquake.

*Hosted by AIHA's Ionizing Radiation Committee and Incident Preparedness and Response Working Group.*

2:00 p.m.–2:30 p.m. » **Local Section Interaction**

Network and collaborate with members from other AIHA local sections.

2:30 p.m.–3:00 p.m. » **Meet Your Sponsor: Student Local Sections and Sponsoring Local Sections**

In a student local section? Connect with your sponsoring local section at this event.

3:30 p.m. » **Raffle**

### Tuesday, June 19

7:30 a.m.–4:00 p.m.

*Going the Extra Mile — Volunteer Appreciation Day: Come hear about the great work AIHA volunteers are doing and how you can get involved.*

9:00 a.m.–9:30 a.m. » **Show and Tell: Recent Volunteer Group Initiatives**

Learn more about recent Volunteer Group activities and how to be involved.

9:30 a.m.–10:00 a.m. » **Bring AIHA to Your Campus**

Learn how easy it is to start a student local section on your campus.

10:00 a.m. » **Missed the General Session?**

Tuesday's General Session to be replayed throughout the day!

11:30 p.m.–Noon » **Socially Networked**

You've heard the term social networking, but what exactly is it? Discover the tools you can use to engage in and monitor social media; some tips on getting started on social media sites like Twitter, LinkedIn, and Facebook; and learn how you can use social media sites to your advantage in your professional career.

1:00 p.m.–2:00 p.m. » **Movie: Inside Japan's Nuclear Meltdown**

View the PBS FRONTLINE investigative report from the perspective of workers and government officials involved in the 2011 nuclear meltdown at Japan's Fukushima Daiichi nuclear complex after the 9.0 magnitude earthquake.

2:00 p.m.–2:30 p.m. » **SharePoint Tutorial**

SharePoint Communities are private communities where groups can collaborate on projects, have discussions, create their own Wiki pages, organize a group calendar, and assign tasks to group members. That sounds great, but how do you use all of that? Learn some tips, tricks, and a general how-to from Craig Sorrell.

3:30 p.m. » **Raffle**

### Wednesday, June 20

7:30 a.m.–4:00 p.m.

*Be Seen, Be Heard — Before It's Too Late: Take advantage of this last opportunity to network with peers and share your ideas!*

9:00 a.m.–9:30 a.m. » **Learn About AIHF Scholarships**

Learn what it takes to apply for an American Industrial Hygiene Foundation Scholarship.

9:30 a.m.–10:00 a.m. » **Student Exchange**

Meet other student members and exchange contact information.

10:00 a.m. » **Missed the General Session?**

Wednesday's Opening Session to be replayed throughout the day!

11:30 p.m.–Noon » **Socially Networked**

You've heard the term social networking, but what exactly is it? Discover the tools you can use to engage in and monitor social media; some tips on getting started on social media sites like Twitter, LinkedIn, and Facebook; and learn how you can use social media sites to your advantage in your professional career.

1:00 p.m.–2:00 p.m. » **Movie: Inside Japan's Nuclear Meltdown**

View the PBS FRONTLINE investigative report from the perspective of workers and government officials involved in the 2011 nuclear meltdown at Japan's Fukushima Daiichi nuclear complex after the 9.0 magnitude earthquake.

2:30 p.m.–3:00 p.m. » **Giving Back — Mentoring Program**

Are you interested in being or finding a mentor? If so, stop by and sign up.

3:30 p.m. » **Raffle**

**Tuesday is Volunteer Appreciation Day at AIHce!**



All awards will be presented at the Opening General Session on Monday, June 18, unless otherwise noted.

## AIHA®

### Edward J. Baier Technical Achievement Award



Established in 1984 in honor of Edward J. Baier, this award is presented by Bureau Veritas to the individual, company, academic institution, organization, or association that has made the most significant contribution to industrial hygiene in recent years. This year's recipient is **Daniel Drolet**, of IRSST in Quebec, Canada. Mr. Drolet was a key innovator in developing IH Mod, a mathematical modeling program for industrial hygienists. His innovations have made IH Mod widely available in several languages, increasing its utility and accessibility. Recently, Drolet has been integral in the development of the IH SkinPerm tool,

which enables industrial hygienists to better understand chemical exposures to the skin.

### Distinguished Service Award



This award recognizes distinguished service in the advancement of industrial hygiene and unique technical contributions to the aims and goals of AIHA. This year's recipient, **Loren Anderson, CIH, ROH**, is the Golder Associates Global EH&S Service Leader and has served on the AIHA Board of Directors as both a Director and Treasurer. He has served on the Editorial Review Board of the *Applied Occupational and Environmental Hygiene* journal, as well as contributing technical expertise to several AIHA committees. A previous recipient of the Edward J. Baier Technical Achievement Award, Mr. Anderson continues to

significantly contribute to the profession.

### Donald E. Cummings Memorial Award



This award was established in 1943 as a tribute to Donald E. Cummings, AIHA's third president. It is given for outstanding contributions to the knowledge and practice of industrial hygiene. This year's recipient is **Franklin Mirer, PhD, CIH**. Dr. Mirer received his PhD in organic chemistry from Harvard University and continued in academia to become a professor of Environmental and Occupational Health at the Hunter College of the City University of New York. An inductee into the National Safety Council's Health and Safety Hall of Fame, Dr. Mirer is widely recognized for his diligent contributions to the profession.

### Kusnetz Award



This award was established in 1987 and is named for its donors, Florence Kusnetz and AIHA Past President Howard Kusnetz. The award is presented to a certified industrial hygienist who has not reached his or her 40th birthday by May 1 of the year in which the award is presented, is employed in the private sector, and has worked to provide the highest standards of health and safety protection for the employees for which he or she is responsible by exhibiting high ethical standards and technical abilities. This year's recipient is **Michael Finnamore, MSPH, CIH, CSP, CHMM**.

Mr. Finnamore has served the AIHA Ionizing Radiation committee as chair, vice chair, and secretary, sharing his knowledge with both AIHA and global EHS employees at Baxter Healthcare Corporation. His training and development plans have led to improved industrial hygiene and radiation knowledge and practice throughout Baxter's global facilities.

### Alice Hamilton Award



This award was established in 1993 by the AIHA Board of Directors. It is presented to an outstanding woman who has made a definitive, lasting achievement in the field of occupational and environmental hygiene through public and community service; social reform; technological innovation or advancements in the scientific approach to the recognition, evaluation, and control of workplace hazards. This year's recipient is **Cindy Coe, CIH**. Ms. Coe is the current Regional Administrator in OSHA Region IV and has served on the AIHA Board of Directors. Among her contributions to the profession, Ms. Coe initiated the interactive

Glen Williamson forum at AIHce to raise awareness about the role of the regulator in addressing workplace health hazards, to illustrate real-life workplace scenarios, and to show the application and effectiveness of control methods and solutions.

### Social Responsibility Award

Established in 2009 and cosponsored and supported by Bureau Veritas, this award is presented to an individual, entity, group, or organization who works inside organizations to develop and promote practical solutions to social responsibility issues related to industrial hygiene or environmental health and safety. This year's winner is **Developing World Outreach Initiative (DWOI)**. DWOI has significantly contributed to international efforts to raise awareness about occupational health and safety. DWOI supports the training of local workers and OHS organizers in developing countries by hosting seminars and workshops, and sponsoring individuals to participate in OHS-related training. In addition, DWOI continually supplies universities, NGOs, and OHS employees in developing countries with books and grants aimed at program development. Richard Hirsh, CIH, DWOI Committee Chairperson, will accept on behalf of DWOI.

### William P. Yant Award



This award was established in 1964 to commemorate the leadership of William P. Yant, ScD, first president of AIHA. Sponsored by the Mine Safety Appliances Company, the award is presented for outstanding contributions in industrial hygiene or allied fields to an individual residing outside the United States. This year's winner is **Tan Kia Tang**. Mr. Tan Kia Tang is the Deputy Director of the Occupational Safety and Health Specialist Department, within the Ministry of Manpower in Singapore. He has practiced industrial hygiene within the Ministry since 1977 and has written



articles, papers, technical reports, and advisories on occupational health and hygiene. Currently serving as a co-chair of the National Globally Harmonized System (GHS), he is working to further implement GHS on chemical hazard communication. Mr. Tan Kia Tang is a professor at both the School of Public Health and the Department of Chemical and Bio-Molecular Engineering of the National University of Singapore.

## President's Award

The President's Award is given to an individual, task force, special interest group, or local section for outstanding contributions to efforts to achieve the mission of the AIHA during the presidency year. Kept secret until conference, the award winner will be announced at the AIHA President's Reception on Wednesday, June 20, between 6:30 p.m.-8:00 p.m.

## 2012 AIHA Fellows

The 2012 Fellow Award winners will be honored during the Tuesday General Session and again at the AIHA Fellows SIG meeting on Wednesday, June 20. Members chosen to be Fellows were nominated by colleagues for their significant contributions to the practice of industrial hygiene or related disciplines. The Fellow classification is limited to no more than 5 percent of the AIHA membership.

## ACGIH®

These awards will also be presented at the ACGIH® Membership Reception and Annual Meeting of the Membership on Sunday, June 17.

## The John J. Bloomfield Award



This award is presented to a young industrial hygienist who pursues the problem of occupational health hazards primarily by doing fieldwork and demonstrates significant contribution to the profession. This year's recipient is **Cara M. Mitchell**. Ms. Mitchell is the EHS Coordinator at SEM Products, Inc. in Rock Hill, South Carolina. In that position, she conducts weekly hazardous waste inspections; composes quarterly and annual hazardous waste reports; conducts monthly safety talks at plant meetings; conducts safety audits and abates the findings; conducts noise monitoring throughout the facility and advises on engineering

and administrative controls; conducts incident investigations; and performs spray booth monitoring for face velocity. Previously, she was the Health and Safety Compliance Officer for North Carolina OSHA. She received her BS degree in Environmental Science from the University of North Carolina Wilmington, and an MS degree in Environmental and Occupational Hygiene from the University of Cincinnati.

## Meritorious Achievement Award



This award is given to members of ACGIH® who have made an outstanding, long-term contribution to the progress of occupational and environmental health. The recipient of this year's award is **John M. Dement, PhD, CIH**. Dr. Dement is a Professor in the Division of Occupational and Environmental Medicine at Duke University Medical Center, and an Adjunct Professor in the Department of Environmental Sciences and Engineering and in the Department of Epidemiology at the University of North Carolina at Chapel Hill, School of Public Health. Dr. Dement has served in the U.S. Public Health Service for 22 years, where he was

employed in various research and management positions by NIOSH and NIEHS. He has authored 100+ peer-reviewed publications on occupational health and safety issues. Dr. Dement has served on numerous national and international panels and

committees, including the WHO and the Institution of Medicine. He also served on the NIOSH Board of Scientific Counselors (1994-2003) and ACGIH Board of Directors (1987-1990), serving as Chair in 1989. Dr. Dement was Editor-in Chief of *Applied Occupational and Environmental Hygiene* from 1993 to 1998.

## William Steiger Memorial Award



This award honors individuals from the social/political sphere whose efforts have contributed to advancements in occupational safety and health. This year's recipient is **Richard E. Fairfax, CIH**. Mr. Fairfax is Deputy Assistant Secretary of OSHA and was named to his new position by Assistant Secretary David Michaels. As Deputy Assistant Secretary, Mr. Fairfax is responsible for supervision of the work of the Occupational Safety and Health Administration's ten Regional Offices across the country and the Directorates of Enforcement and Construction. Prior to this position, Mr. Fairfax served as the Director of Enforcement

Programs and Acting Director of Construction Programs for OSHA. A certified industrial hygienist, he has worked for OSHA for 32 years as a field industrial hygienist, regional industrial hygienist, and as a senior industrial hygienist. Mr. Fairfax also served on the Editorial Review Board for the *Journal of Occupational and Environmental Hygiene*.

## Herbert E. Stokinger Award



This award is given each year to an individual who has made a significant contribution to the broad field of industrial and environmental toxicology. This year's recipient is **Michelle M. Schaper, PhD**. Dr. Schaper is a toxicologist with the U.S. Department of Labor, Mine Safety and Health Administration (MSHA). She has over 25 years of experience as an inhalation toxicologist. Dr. Schaper received a BS degree in Chemistry, an MS degree in Industrial Hygiene, and a PhD in Toxicology, all from the University of Pittsburgh. She was a faculty member, a graduate student advisor, and a researcher at the University of Pittsburgh for 12 years

after completing her doctorate. Dr. Schaper is the author or co-author of numerous abstracts, peer-reviewed articles, and book chapters, focusing on the use of animal models to evaluate the respiratory effects of airborne chemicals. She has applied the data obtained in these animal models to predict safe exposure conditions for workers. Dr. Schaper has served on the AIHA® Toxicology Committee and the ACGIH® Threshold Limit Values for Chemical Substances (TLV®-CS) Committee. This award will be presented at the Stokinger Lecture on Thursday, June 21, and announced at the AIHce Opening Session.

## AIHA Volunteer Groups

### David L. Swift Memorial Award

This award honors the memory of Dr. David L. Swift, professor at The Johns Hopkins University, for his outstanding contributions to aerosol and industrial hygiene research. Aerosol research papers published during the year in the *Journal of Occupational and Environmental Hygiene* are reviewed by the AIHA Aerosol Technology Committee.

### Don B. Chaffin Award

The Ergonomics Committee established the Chaffin Award in 2008 in recognition of the Best Professional Podium Presentation and Roundtable Presentation. The award honors Dr. Chaffin's many contributions to the field of ergonomics and to AIHA.

## Donna Doganiero Award

The AIHA Safety Committee presents a Best Crossover Session Award for an AIHce presentation of exceptional quality and one that has particular relevance to the field of Occupational Safety. The Safety Committee makes this award in the name of Donna Doganiero, a truly outstanding individual, to recognize her achievements and vision in continuing to move the field of industrial hygiene and safety forward.

## H. Kenneth Dillon Memorial Award

This award is presented by the Biosafety and Environmental Microbiology Committee to honor the memory of Dr. Ken Dillon, a former AIHA fellow and principal instructor for several years of the popular PDC "Prevention, Determination, and Remediation of Biological Contamination in Indoor Environments." The award is presented to the best student poster at AIHce.

## Indoor Environmental Quality Committee Best IEQ Paper Award

Since 1997, the Indoor Environmental Quality (IEQ) Committee has evaluated peer reviewed articles that promote the practice of IEQ. The authors of the winning paper are honored at the committee's annual meeting. To be nominated, the paper must: (a) be peer reviewed and published during the previous calendar year in the *Journal of Occupational and Environmental Hygiene*; (b) provide practical information for industrial hygienists and expand the knowledge base of indoor environmental quality professionals; (c) address a critical issue in IEQ; and (d) present the topic in an engaging and well-written manner.

## John A. Leonowich Award for Educational Excellence in Nonionizing Radiation

The John A. Leonowich Award honors educational excellence in nonionizing radiation by students actively pursuing NIR initiatives through research or education.

## John M. White Award

Established by the Respiratory Protection Committee, this award encourages scientific and application-oriented research in respiratory protection. It recognizes work that enhances the knowledge base in an area of understanding or provides new insight that will lead to improved employee protection.

## John Palassis Memorial Award

The Communication and Training Methods Committee presents this award to an outstanding member of the committee for his or her extraordinary contribution to the committee's mission.

## Larry and Ruth Birkner Award

The Birkner Award is presented by the Management Committee in honor of AIHA member Larry Birkner, past Chair of the Management Committee, and his wife, Ruth McIntyre Birkner. The award recognizes significant achievement in one of several management areas in industrial hygiene practice: achievement in one or more aspects of industrial hygiene management, teaching achievements in industrial hygiene management, or other achievements deemed worthy. The award is presented at the Annual Meeting of the Management Committee.

## Margaret Samways Memorial Student Poster Award

This award honors the memory of Margaret Samways, past Chair and longtime member of the Communication and Training Methods Committee. Margaret, with her vast knowledge and practical experience as a trainer, worked tirelessly to provide industrial hygienists with valuable tools to deliver effective training that facilitates learning and ultimately improves worker health.

## Noise Committee Outstanding Lecture

This award was established in 1995 to encourage excellence in education, public speaking, and presentation quality on noise-related topics at AIHce. The award is determined by a vote of the Noise Committee and is based on audience evaluations.

## Occupational and Environmental Medicine Committee Award

The Occupational and Environmental Medicine Committee recognizes an individual for excellence in the field of occupational and environmental medicine. Judges consider presentations, professional development courses, poster sessions and peer reviewed published manuscripts from both the medical and industrial hygiene disciplines that contribute to the advancement of occupational and environmental medicine.

## Rachel Carson Award

AIHA's Environmental Issues Committee bestows this highest honor on an EHS group or professional who has attained outstanding success in his/her business, profession, or life's work.

## Real-Time Detection Systems Committee Outstanding Presentation Awards

All Real-Time Detection Systems Committee poster presentations are eligible for two awards: Best Poster and Best Student Poster. These awards acknowledge excellence in basic or applied research in the gas and vapor detection field. The winning posters are determined by the Real-Time Detection Systems Committee and registrant evaluations.

## Rochelle Crew Memorial Award

The Construction Committee presents this award in memory of Ms. Crew, a former member of the committee and longtime instructor of construction safety PDCs. The award is given to the best construction-related paper, PDC or technical presentation at the previous year's AIHce.

## Sampling and Laboratory Analysis Committee Award

This award recognizes outstanding contributions to the field of industrial hygiene sampling analysis and is given for Best Presentation and Best Poster.

## Tichauer Award

The Ergonomics Committee established the Tichauer Award in 1996 for Best Ergonomics Podium and Best Ergonomics Poster by a young researcher. The award was established to encourage ergonomics-related conference participation and to recognize excellence in research conducted by students and young researchers.

## Upton Sinclair Memorial Lecture

The Upton Sinclair Memorial Lecture on outstanding occupational health, safety, and environmental investigative journalism is awarded by the Social Concerns Committee. The 2012 Upton Sinclair Memorial Lecture will be delivered by **Chris Hamby** of the Center for Public Integrity at 10:30 a.m. on Tuesday.

## The Golden Seed Award

The Students and Early Career Professionals Committee established this award in 2007. It is presented to an individual who has demonstrated a commitment to promoting industrial hygiene and/or provided guidance and mentoring to students or early career professionals. This award will be presented at the Volunteer Recognition Ceremony.

## AIHce Best Poster Award

The Best Poster Award is based on two criteria: (1) technical content — organization of the poster material, current importance of the topic, sophistication of scientific or technological aspects of the subject, and the importance of the conclusions for today's workers; and (2) visual communication — clarity, color, space, balance, text, graphics and effectiveness.

## 2011 AIHA Best Seller

This award is presented to the authors of publications that sold the most copies during the year. This year two books receive this honor. The 2011 Best Seller is presented to **Daniel H. Anna, PhD, CIH, CSP**, editor of *The Occupational Environment: Its Evaluation, Control, and Management, 3rd Edition*. In 2011, AIHA sold 567 copies of this publication. Also receiving this award are **Allan K. Fleeger, CIH, CSP**, and **Dean L. Lillquist, PhD, CIH, CHMM**, authors of the *Industrial Hygiene Reference & Study Guide, 3rd Edition*. In 2011, AIHA sold 426 copies of this publication. These awards will be presented Tuesday at the Volunteer Recognition Ceremony.

## 2011 Critics' Choice Award

This award honors a publication completed in 2011 and evaluated by members of the Publications Committee. The committee selected this publication based on its impact on the profession, originality, and the quality of writing. This year's recipient is **Daniel H. Anna, PhD, CIH, CSP**, editor of *The Occupational Environment: Its Evaluation, Control, and Management, 3rd Edition*. The award will be presented at the Volunteer Recognition Ceremony.

## AIHA Local Section Awards

The Michigan Industrial Hygiene Society Best Paper Award was established 1957 to recognize an outstanding publication in the journal of the American Industrial Hygiene Association. In 1989, the MIHS Board of Directors voted to also recognize the authors of the Best Paper in applied industrial hygiene from *Applied Occupational and Environmental Hygiene*. The journals were combined in 2004 to form the current *Journal of Occupational and Environmental Hygiene*. MIHS continues to present a Best Paper award to the authors of an outstanding article selected from the Journal. This year's winner is *Development of a Sampling Patch to Measure Dermal Exposures to Monomeric and Polymeric 1,6-Hexamethylene Diisocyanate: A Pilot Study* by **Jennifer M. Thomasen, Kenneth W. Fent and Leena A. Nylander-French** at UNC, Chapel Hill, NC. It will be presented at the Volunteer Recognition Ceremony.



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## AIHA®

### 2012 Finance Committee Meeting

Wednesday, June 20, 1:30 p.m.–3:00 p.m., ICC, 211

### Academic Accreditation Committee Meeting

Sunday, June 17, 6:00 p.m.–9:00 p.m., JW Marriott, 201

### Academic SIG Meeting

Wednesday, June 20, 1:30 p.m.–3:30 p.m., JW Marriott, White River Ballroom D

### Academy Conference Team Meeting

Monday, June 18, 12:30 p.m.–1:30 p.m., ICC, Conference Room West

### Academy of Industrial Hygiene Meeting

Saturday, June 16, 10:00 a.m.–5:00 p.m., JW Marriott, 206

### Aerosol Technology Committee Meeting

Tuesday, June 19, 10:00 a.m.–Noon, JW Marriott, White River Ballroom C

### Annual Business Meeting

Thursday, June 21, 8:30 a.m.–10:30 a.m., ICC, 120

### AIHA-LAP, LCC Accredited Laboratories Forum

Sunday, June 17, 5:30 p.m.–7:30 p.m., JW Marriott, 309

### Analytical Accreditation Board Meeting

Saturday, June 16, 8:30 a.m.–5:00 p.m., JW Marriott, 201

### ANSI/AIHA Z88 Respiratory Protection Standards Committee Meeting

Wednesday, June 20, 10:00 a.m.–Noon, JW Marriott, 206

### ANSI/AIHA Z9 Ventilation System Standards Committee Meeting

Monday, June 18, 2:00 p.m.–4:00 p.m., JW Marriott, 206

### ANSI/AIHA Z9.12 Subcommittee Meeting

Monday, June 18, 10:30 a.m.–12:30 p.m., JW Marriott, 206

### Biological Monitoring Committee Meeting

Wednesday, June 20, 10:00 a.m.–Noon, JW Marriott, 107

### Biosafety and Environmental Microbiology Committee Meeting

Tuesday, June 19, 1:30 p.m.–3:30 p.m., JW Marriott, White River Ballroom B

### Blue Council Meeting

Monday, June 18, 3:30 p.m.–4:30 p.m., JW Marriott, 105

### Board of Directors Meeting

Sunday, June 17, 8:00 a.m.–4:30 p.m., JW Marriott, White River Ballroom D

### Board of Directors Meeting

Thursday, June 21, 11:00 a.m.–4:00 p.m., JW Marriott, 104

### Career and Employment Services Committee Meeting

Wednesday, June 20, 5:00 p.m.–7:00 p.m., JW Marriott, 311

### Clandestine Laboratory Working Group Meeting

Tuesday, June 19, 10:00 a.m.–Noon, JW Marriott, 105

### Communication and Training Methods Committee Meeting

Tuesday, June 19, 1:30 p.m.–3:30 p.m., JW Marriott, 105

### Computer Applications Committee Meeting

Wednesday, June 20, 3:30 p.m.–5:30 p.m., JW Marriott, 103

### Confined Spaces Committee Meeting

Monday, June 18, 3:30 p.m.–5:30 p.m., JW Marriott, White River Ballroom C

### Construction Committee Meeting

Wednesday, June 20, 9:00 a.m.–Noon, JW Marriott, White River Ballroom B

### Consultants SIG Business Meeting

Wednesday, June 20, 1:30 p.m.–3:30 p.m., JW Marriott, 102

### Continuing Education Committee Business Meeting

Tuesday, June 19, 2:00 p.m.–5:00 p.m., ICC, 211

### Control Banding Working Group Meeting

Wednesday, June 20, 3:30 p.m.–5:30 p.m., JW Marriott, 104

### EHSMS Task Force

Sunday, June 17, 5:00 p.m.–7:00 p.m., JW Marriott, 307

### Engineering Committee Meeting

Tuesday, June 19, 10:00 a.m.–Noon, JW Marriott, 103

### Engineering Industry SIG Meeting

Tuesday, June 19, 1:30 p.m.–3:30 p.m., JW Marriott, 102

### Environmental Issues Committee Meeting

Tuesday, June 19, 10:00 a.m.–Noon, JW Marriott, 102

### Environmental Issues SIG Meeting

Monday, June 18, 10:00 a.m.–Noon, JW Marriott, 107

### Ergonomics Committee Meeting

Tuesday, June 19, 1:30 p.m.–3:30 p.m., JW Marriott, 104

### Exposure Assessment Strategies Committee Meeting

Monday, June 18, 10:00 a.m.–Noon, JW Marriott, White River Ballroom B

### Fellows SIG Meeting

Wednesday, June 20, 4:00 p.m.–6:00 p.m., JW Marriott, Grand Ballroom 1

### Finance Committee Meeting

Monday, June 18, 2:00 p.m.–4:00 p.m., ICC, 211

### Future Leaders and Young Members Reception (by invitation)

Sunday, June 17, 7:00 p.m.–10:00 p.m., Cadillac Ranch, 39 W. Jackson Place, Union Station

### Government Affairs Update

Wednesday, June 20, 2:00 p.m.–2:30 p.m., ICC, 212

### Green Building Working Group Meeting

Wednesday, June 20, 1:30 p.m.–3:30 p.m., JW Marriott, 103

### Green Council Meeting

Tuesday, June 19, 2:30 p.m.–3:30 p.m., JW Marriott, White River Ballroom A

### Guideline Foundation Board Meeting

Monday, June 18, 11:00 a.m.–1:00 p.m., JW Marriott, 109

### Health Care Working Group Meeting

Monday, June 18, 3:30 p.m.–5:30 p.m., JW Marriott, White River Ballroom I

### Incident Preparedness and Response Working Group Meeting

Wednesday, June 20, 3:30 p.m.–5:30 p.m., JW Marriott, 107

### Indigo Council Meeting

Monday, June 18, 4:30 p.m.–5:30 p.m., JW Marriott, 103

### Indoor Environmental Quality Committee

Wednesday, June 20, 10:00 a.m.–Noon, JW Marriott, White River Ballroom C

### Indoor Environmental Quality SIG Meeting

Monday, June 18, 3:30 p.m.–5:30 p.m., JW Marriott, 104

### International Affairs Committee Meeting

Monday, June 18, 2:00 p.m.–6:00 p.m., JW Marriott, White River Ballroom G

### International Reception (by invitation)

Monday, June 18, 6:30 p.m.–8:00 p.m., JW Marriott, White River Ballroom F

### International Training/Qualifications in OH Meeting

Tuesday, June 19, 3:00 p.m.–5:00 p.m., ICC, 210

### Ionizing Radiation Committee Meeting

Monday, June 18, 10:00 a.m.–Noon, JW Marriott, 105

### Joint Industrial Hygiene Ethics Education Committee Meeting

Sunday, June 17, 5:00 p.m.–7:00 p.m., JW Marriott, 308

### Laboratory Health and Safety Committee Meeting

Wednesday, June 20, 1:30 p.m.–3:30 p.m., JW Marriott, White River Ballroom C

### Law Committee Meeting

Tuesday, June 19, 1:30 p.m.–3:30 p.m., JW Marriott, 107

### Management Committee Meeting

Monday, June 18, 10:00 a.m.–Noon, JW Marriott, White River Ballroom D

### Minority SIG Meeting

Tuesday, June 19, 10:00 a.m.–Noon, JW Marriott, White River Ballroom D

### MSA/AIHA Reception

Tuesday, June 19, 6:30 p.m.–7:30 p.m., JW Marriott, Grand Ballroom 5

### Nanotechnology Working Group Meeting

Wednesday, June 20, 1:30 p.m.–3:30 p.m., JW Marriott, White River Ballroom B

### Noise Committee Meeting

Monday, June 18, 3:30 p.m.–5:30 p.m., JW Marriott, White River Ballroom D

### Nonionizing Radiation Committee Meeting

Monday, June 18, 3:30 p.m.–5:30 p.m., JW Marriott, 106

### Occupational and Environmental Epidemiology Committee Meeting

Tuesday, June 19, 1:30 p.m.–3:30 p.m., JW Marriott, 103

### Occupational and Environmental Medicine Committee Meeting

Tuesday, June 19, 10:00 a.m.–Noon, JW Marriott, 106

### Oil and Gas Working Group

Wednesday, June 20, 10:00 a.m.–Noon, JW Marriott, White River Ballroom D

### Orange Council Meeting

Wednesday, June 20, 4:30 p.m.–5:30 p.m., JW Marriott, 105

## Past Presidents' Brunch (by invitation)

Wednesday, June 20, 9:30 a.m. – 11:00 a.m., JW Marriott, 309

## Permanent Conference Committee Meeting

Wednesday, June 20, 4:00 p.m. – 6:00 p.m., ICC, Conference Room West

## Pharmaceutical Round Robin Committee Meeting

Wednesday, June 20, 8:00 a.m. – 9:30 a.m., JW Marriott, 102

## Practice, Standards and Guidelines Committee Meeting

Wednesday, June 20, 10:00 a.m. – Noon, JW Marriott, 103

## President's Reception (by invitation)

Wednesday, June 20, 6:30 p.m. – 8:00 p.m., JW Marriott, Grand Ballroom 3

## Product Steward Networking Reception

Sunday, June 17, 5:30 p.m. – 7:00 p.m., JW Marriott, 303

## Protective Clothing and Equipment Committee Meeting

Monday, June 18, 1:30 p.m. – 3:30 p.m., JW Marriott, 103

## Publications Committee Meeting

Tuesday, June 19, 10:30 a.m. – Noon, ICC, Conference Room West

## Real-Time Detection Systems Committee Meeting

Monday, June 18, 10:00 a.m. – Noon, JW Marriott, White River Ballroom C

## Red Council Meeting

Wednesday, June 20, 10:00 a.m. – 11:00 a.m., JW Marriott, 102

## Respiratory Protection Committee Meeting

Tuesday, June 19, 1:30 p.m. – 3:30 p.m., JW Marriott, White River Ballroom I

## Risk Assessment Committee Meeting

Monday, June 18, 1:30 p.m. – 3:30 p.m., JW Marriott, 104

## Safety Committee Meeting

Monday, June 18, 1:30 p.m. – 3:30 p.m., JW Marriott, 102

## Sampling and Laboratory Analysis Committee Meeting

Tuesday, June 19, 1:30 p.m. – 3:30 p.m., JW Marriott, White River Ballroom C

## Saturday PDC Monitor Meeting

Saturday, June 16, 7:00 a.m. – 7:30 a.m., ICC, 108

## SDS and Label Authoring Registry SME Team Meeting

Monday, June 18, 12:30 p.m. – 2:00 p.m., ICC, 210

## Social Concerns Committee Meeting

Wednesday, June 20, 10:00 a.m. – Noon, JW Marriott, 104

## Stewardship and Sustainability Committee Meeting

Monday, June 18, 3:30 p.m. – 5:30 p.m., JW Marriott, White River Ballroom B

## Sunday PDC Monitor Meeting

Sunday, June 17, 7:00 a.m. – 7:30 a.m., ICC, 108

## Toxicology Committee Meeting

Monday, June 18, 1:30 p.m. – 3:30 p.m., JW Marriott, 107

## Value Strategy Committee of the Academy Meeting

Monday, June 18, 10:00 a.m. – Noon, JW Marriott, 102

## Violet Council Meeting

Wednesday, June 20, 11:00 a.m. – Noon, JW Marriott, 105

## Volunteer Group Chairs Meeting

Thursday, June 21, 8:30 a.m. – 10:00 a.m., ICC, 210

## Volunteer Group Secretaries Orientation Meeting

Thursday, June 21, 10:00 a.m. – 11:30 a.m., ICC, 211

## Volunteer Recognition Ceremony and Reception

Tuesday, June 19, 4:30 p.m. – 6:30 p.m., Marriott Downtown, Marriott Ballroom

## WEEL Committee

Thursday, June 21, 9:00 a.m. – 5:00 p.m., JW Marriott, 105

## Yellow Council Meeting

Monday, June 18, 10:00 a.m. – 11:00 a.m., JW Marriott, 106

## AIHA Local Sections

### Local Sections Council Business Meeting

Tuesday, June 19, 1:30 p.m. – 3:30 p.m., JW Marriott, White River Ballroom G

### Local Sections Officers Training

Thursday, June 21, 10:00 a.m. – 11:00 a.m., JW Marriott, 106

### Student Local Sections Council Business Meeting

Tuesday, June 19, 11:00 a.m. – 1:00 p.m., JW Marriott, White River Ballroom B

## AIHA Student and Early Career Professionals

### Mentoring Program Networking Event

Monday, June 18, 6:00 p.m. – 8:00 p.m., Indianapolis Colts Grille, 110 W. Washington Street

### Student Local Sections Council Business Meeting

Tuesday, June 19, 11:00 a.m. – 1:00 p.m., JW Marriott, White River Ballroom B

### Students and Early Career Professionals Committee Meeting

Tuesday, June 19, 1:00 p.m. – 3:00 p.m., JW Marriott, White River Ballroom D

## AIHF

### AIHF Board of Trustees Meeting

Tuesday, June 19, 3:30 p.m. – 5:30 p.m., JW Marriott, 106

### AIHF Recognition Reception (by invitation)

Sunday, June 17, 6:00 p.m. – 7:00 p.m., Cadillac Ranch, 39 W. Jackson Place, Union Station

## JOEH

### JOEH Editorial Review Board Meeting

Sunday, June 17, 7:00 p.m. – 9:00 p.m., JW Marriott, 203

### JOEH LLC Board Meeting

Tuesday, June 19, 4:00 p.m. – 6:00 p.m., JW Marriott, 311

## ACGIH®

### Board of Directors Meeting

Sunday, June 17, 8:00 a.m. – 3:00 p.m., JW Marriott, 103

### FOHS Board of Trustees Meeting

Monday, June 18, 10:30 a.m. – Noon, ICC, Conference Room East

### Membership Reception and Annual Meeting of the Membership

Sunday, June 17, 6:00 p.m. – 7:30 p.m., JW Marriott, 306

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# Stewardship & Sustainability Schedule

AIHA has been the trusted provider of high quality education and professional resources for industrial hygienists and occupational and environmental health and safety professionals for 73 years. AIHA has now expanded its quality programming to meet the needs of product stewards.

## Product Steward Networking Reception

Sunday, June 17, 5:30 p.m.–7:00 p.m.  
JW Marriott, 303

Join your colleagues for a drink and good conversation. This is a perfect opportunity to catch up with longtime friends and make new connections.

## Product Steward Luncheon Discussion

Monday, June 18, 1:00 p.m.–2:00 p.m.  
ICC, Hall B

Luncheon discussions are small conversational groups that focus on current issues, trends, relevant topics, and research. Purchase lunch from a concession and choose your discussion. Seating is limited and available first-come, first-served.

## Product Steward Program Schedule

### Saturday

- PDC 020 Registry Preparation: MSDS and Label Authoring, 8:00 a.m.–5:00 p.m. » ICC, 202
- PDC 104 GHS and OSHA Hazard Communication Implementation, 8:00 a.m.–5:00 p.m. » ICC, Wabash 2
- PDC 109 Sustainability Measures and Metrics: Changing the World Through Transparency, 8:00 a.m.–5:00 p.m. » ICC, 126
- PDC 110 Product Stewardship: Chemical and Consumer Products Risk Management, 8:00 a.m.–5:00 p.m. » ICC, 212
- PDC 701 ANSI Z10 (2012): Continual Improvement System for Sustainable HSE Management, 8:00 a.m.–5:00 p.m. » ICC, 240

### Sunday

- PDC 408 GHS: The New Hazard Communication, 8:00 a.m.–5:00 p.m. » ICC, Wabash 2
- PDC 410 Lean Safety, Health, and Sustainability, 8:00 a.m.–5:00 p.m. » ICC, Wabash 1
- PDC 701 ANSI Z10 (2012): Continual Improvement System for Sustainable HSE Management, 8:00 a.m.–5:00 p.m. » ICC, 240

### Monday

- RT 205 Sustainable Operations and Practices in Lab Environments, 10:30 a.m.–1:00 p.m. » ICC, 127
- CR 307 The Synergy of Environmental Health and Safety and Sustainability, 2:00 p.m.–3:00 p.m. » ICC, 202
- CR 309 ISO 14001, Lean and Six Sigma Sustainability Programs, 3:30 p.m.–4:30 p.m. » ICC, 202

### Tuesday

- RT 215 Sustainability Management: Systems, Process, and Culture, 10:30 a.m.–12:30 p.m. » ICC, 127
- RT 217 GHS—The New OSHA Hazard Communication, 10:30 a.m.–1:00 p.m. » ICC, 125
- RT 219 Downstream User Obligations Under REACH, 1:30 p.m.–5:30 p.m. » ICC, 122

### Wednesday

- RT 228 Trends in Green Chemistry: From Policy Reform to Innovation, 10:00 a.m.–12:30 p.m. » ICC, 125
- RT 234 Sustainability/CSR Reporting and the OHS Missing Link, 1:30 p.m.–3:30 p.m. » ICC, 125
- RT 235 How to Effectively Implement the New Hazcom (GHS)—A Chemical User's Perspective, 5:00 p.m.–7:30 p.m. » ICC, Wabash 2

### Thursday

- CR 334 Understanding Corporate Social Responsibility: New Opportunities for EHS Professionals, 1:00 p.m.–2:00 p.m. » ICC, 102

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**Product Stewardship  
& Sustainability Network**  
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# AT-A-GLANCE: Friday and Saturday, June 15 and 16

## Friday, June 15

8:00 a.m.–4:30 p.m.

PDC 001 Certified Safety Professional (CSP) Exam Preparation Workshop  
*ICC, 203*

8:00 a.m.–5:00 p.m.

PDC 002 CHMM Preparation: Essentials of Hazardous Materials Management (EHMM)  
*ICC, 208*

PDC 003 QEP Preparation: Environmental Science, Management, Policy and Environmental Review  
*ICC, 210*

5:00 p.m.–7:00 p.m.

Registration  
*ICC, Wabash Lobby*

## Saturday, June 16

7:00 a.m.–7:30 a.m.

Saturday PDC Monitor Meeting  
*ICC, 108*

7:00 a.m.–5:30 p.m.

Registration  
*ICC, Wabash Lobby*

7:30 a.m.–11:30 a.m.

Speaker Ready Room  
*ICC, 108*

8:00 a.m.–Noon

PDC 201 Introduction to EHS for the Nanotechnology Industry  
*ICC, 104*

PDC 202 Creative Strategies for Adult Learners  
*ICC, 101*

PDC 203 Case Studies on Ethical Decision Making  
*ICC, 103*

8:00 a.m.–4:30 p.m.

PDC 001 Certified Safety Professional (CSP) Exam Preparation Workshop  
*ICC, 203*

8:00 a.m.–5:00 p.m.

PDC 002 CHMM Preparation: Essentials of Hazardous Materials Management (EHMM)  
*ICC, 208*

PDC 003 QEP Preparation: Environmental Science, Management, Policy and Environmental Review  
*ICC, 210*

PDC 010 Train-the-Trainer: 4-Gas Monitor/PID Field Use  
*ICC, 209*

PDC 020 Registry Preparation: MSDS and Label Authoring  
*ICC, 202*

PDC 101 Bayesian Statistics: Overview and Applications in IH Data Interpretation  
*ICC, Wabash 1*

PDC 102 Biological Safety 1: Fundamentals of Biosafety  
*ICC, 120*

PDC 103 Ergonomics Toolkit: Application of Common Ergonomic Assessment Tools  
*ICC, 121*

PDC 104 GHS and OSHA Hazard Communication Implementation  
*ICC, Wabash 2*

PDC 105 Implementing a Combustible Dust Program  
*ICC, 122*

PDC 106 Incorporating Prevention through Design Methods into the Design and Re-design Process  
*ICC, 127*

PDC 107 Moisture Evaluations in Green and LEED Construction  
*ICC, 124*

PDC 108 Practical Applications of Portable Radiation Instruments  
*ICC, 123*

PDC 109 Sustainability Measures and Metrics: Changing the World Through Transparency  
*ICC, 126*

PDC 110 Product Stewardship: Chemical and Consumer Products Risk Management  
*ICC, 212*

PDC 111 Wellness and Health Education: Connecting IH and Worker Health  
*ICC, 110*

PDC 112 Worker Fatigue Risk Management: Applying New Standards  
*ICC, 125*

PDC 701 ANSI Z10 (2012): Continual Improvement System for Sustainable HSE Management  
*ICC, 240*

PDC 703 NFPA 70E (2012): Basic Electrical Safety/Arc Flash  
*ICC, 241*

PDC 704 Exposure Assessment Strategies and Statistics  
*ICC, 242*

PDC 705 Exposure Modeling: Using Mathematical Models to Estimate Exposure  
*ICC, 243*

PDC 707 The Art of Safety: Mastering Communication Techniques  
*ICC, 244*

PDC 708 Introduction to the Value Strategy: A Process for Promoting Health and Safety Interventions  
*ICC, 245*

12:30 p.m.–5:30 p.m.

Speaker Ready Room  
*ICC, 108*

1:00 p.m.–5:00 p.m.

PDC 301 Defining and Evaluating Data Quality for Exposure Assessment  
*ICC, 104*

PDC 302 Emergency Response: Application of Online Resources  
*ICC, 101*

PDC 303 Applied Concepts of Nanotechnology for the EHS Professional  
*ICC, 102*

PDC 304 Noise Exposure Assessment: Sampling Strategy and Data Acquisition  
*ICC, 103*

**AIHA®**

8:30 a.m.–5:00 p.m.

Analytical Accreditation Board Meeting  
*JW Marriott, 201*

10:00 a.m.–5:00 p.m.

Academy of Industrial Hygiene Meeting  
*JW Marriott, 206*

**Note Meeting Rooms ...**  
**ICC = Indiana Convention Center**



## Calling all First Time Attendees!

Join us for an AIHce Orientation on Monday, 7:00 a.m.–8:00 a.m., and learn how to get the most out of your time spent at the conference.

**Sunday, June 17****7:00 a.m.–7:30 a.m.**Sunday PDC Monitor Meeting  
ICC, 108**7:00 a.m.–5:30 p.m.**Registration  
ICC, Wabash Lobby**7:30 a.m.–11:30 a.m.**Speaker Ready Room  
ICC, 108**7:30 a.m.–4:00 p.m.**Volunteer Collaboration Café  
ICC, Crossroads Lobby**8:00 a.m.–Noon**PDC 501 Particle Size–Selective Aerosol Sampling:  
Respirable, Thoracic, Inhalable  
ICC, 102PDC 502 Case Studies on Ethical Decision Making  
ICC, 103PDC 503 Smart Devices and the EHS Professional  
ICC, 104**8:00 a.m.–4:30 p.m.**PDC 001 Certified Safety Professional (CSP) Exam  
Preparation Workshop  
ICC, 203**8:00 a.m.–5:00 p.m.**PDC 002 CHMM Preparation: Essentials of  
Hazardous Materials Management (EHMM)  
ICC, 208PDC 010 Train-the-Trainer: 4-Gas Monitor/PID  
ICC, 209PDC 401 A New Look at Permit Spaces  
ICC, 120PDC 402 Application of Advanced Ergonomic  
Assessment Tools  
ICC, 126PDC 403 Applying and Implementing Health Hazard  
and Control Banding Strategies  
ICC, 202PDC 404 Case Studies in Biological Monitoring  
ICC, 212PDC 405 Engineering Controls to Minimize Fugitive  
Dusts  
ICC, 122PDC 406 Exceptional Functional Leadership  
ICC, Wabash 3PDC 408 GHS: The New Hazard Communication  
ICC, Wabash 2PDC 409 Introduction to Risk Assessment for the  
Industrial Hygienist  
ICC, 121PDC 410 Lean Safety, Health, and Sustainability  
ICC, Wabash 1PDC 411 Methods and Applications for Exposure  
Assessment Chemical Detection in Real Time  
ICC, 124PDC 412 Mold Recognition: Effective Sampling  
Strategies and Results Interpretation  
ICC, 123PDC 413 Noise Control Engineering  
ICC, 143PDC 414 Nonionizing Radiation, Hands-on  
Measurements  
ICC, 205PDC 415 Ramping Up Your Hearing Protection and  
Jazzing Up Your Hearing Conservation  
ICC, 145PDC 416 REACH: A Risk Management Strategy  
ICC, 128PDC 417 Surface Disinfection for Infection Prevention  
ICC, 142PDC 418 Surface Sampling for Metals: Issues,  
Methods, and Strategy  
ICC, 141PDC 420 Vapor Intrusion Investigation and Mitiga-  
tion: Advances in Assessment and Practice  
ICC, 140PDC 421 Welding: IH's Latest Challenge  
ICC, 125PDC 422 Writing Effective IH Reports  
ICC, 211PDC 701 ANSI Z10 (2012): Continual Improvement  
System for Sustainable HSE Management  
ICC, 240PDC 703 NFPA 70E (2012): Basic Electrical Safety/  
Arc Flash  
ICC, 241PDC 704 Exposure Assessment Strategies and  
Statistics  
ICC, 242PDC 705 Exposure Modeling: Using Mathematical  
Models to Estimate Exposure  
ICC, 243PDC 707 The Art of Safety: Mastering  
Communication Techniques  
ICC, 244PDC 708 Introduction to the Value Strategy:  
A Process for Promoting Health and Safety  
Interventions  
ICC, 245**12:30 p.m.–5:30 p.m.**Speaker Ready Room  
ICC, 108**1:00 p.m.–5:00 p.m.**PDC 601 CBRN Respirator Selection, Use, and Main-  
tenance Guidelines  
ICC, 110PDC 602 Disaster Responder: Protection for Workers  
in Hot Environments  
ICC, 102PDC 603 Exposure Assessment Using Whole–Air  
Sampling Techniques  
ICC, 104PDC 604 Strategies for Managing Odor Annoyance  
in the Workplace  
ICC, 127**2:30 p.m.–6:00 p.m.**AIHce Mobile App Help Desk  
ICC, Wabash Lobby**ACGIH®****8:00 a.m.–3:00 p.m.**ACGIH Board of Directors Meeting  
JW Marriott, 103**6:00 p.m.–7:30 p.m.**ACGIH Membership Reception and Annual Meeting of  
the Membership  
JW Marriott, 306**AIHA®****8:00 a.m.–4:30 p.m.**AIHA Board of Directors Meeting  
JW Marriott, White River Ballroom D**Noon–5:00 p.m.**AIHA Registry Programs Competency Assessments  
JW Marriott, 101**5:00 p.m.–7:00 p.m.**EHSMS Task Force  
JW Marriott, 307Joint Industrial Hygiene Ethics Education Committee  
Meeting  
JW Marriott, 308**5:30 p.m.–7:00 p.m.**Product Stewardship & Sustainability Network  
Reception  
JW Marriott, 303**5:30 p.m.–7:30 p.m.**AIHA–LAP, LCC Accredited Laboratories Forum  
JW Marriott, 309**6:00 p.m.–9:00 p.m.**Academic Accreditation Committee Meeting  
JW Marriott, 201**7:00 p.m.–10:00 p.m.**Future Leaders and Young Members Reception  
(by invitation)  
Cadillac Ranch, 39 West Jackson Place,  
Union Station**Note Meeting Rooms ...**  
ICC = Indiana Convention Center

#### JOEH

7:00 p.m.–9:00 p.m.

JOEH Editorial Review Board Meeting  
JW Marriott, 203

#### AIHF

6:00 p.m.–7:00 p.m.

AIHF Recognition Reception (Invitation Only)  
Cadillac Ranch, 39 West Jackson Place,  
Union Station

#### Ancillary

7:30 a.m.–5:00 p.m.

ABIH Board Meeting  
JW Marriott, 105

8:00 a.m.–5:00 p.m.

Board of Certification in Professional Ergonomics  
(BCPE) Certification Exam  
JW Marriott, 102

9:30 a.m.–6:30 p.m.

IOHA Board Meeting (by invitation)  
JW Marriott, 104



AIHce cannot guarantee the appearance  
of all presenters listed in this program.  
We regret any disappointment if a particular  
speaker is unable to present.

## AIHce 2012 Blood Drive

ICC, 110

You're the type we're looking for!



Monday, June 18 and Tuesday, June 19

9:00 a.m.–2:00 p.m.

Wednesday, June 20

9:00 a.m.–1:00 p.m.

Giving blood is safe, simple and takes less than an hour. Requirements are minimal.

Identification required.

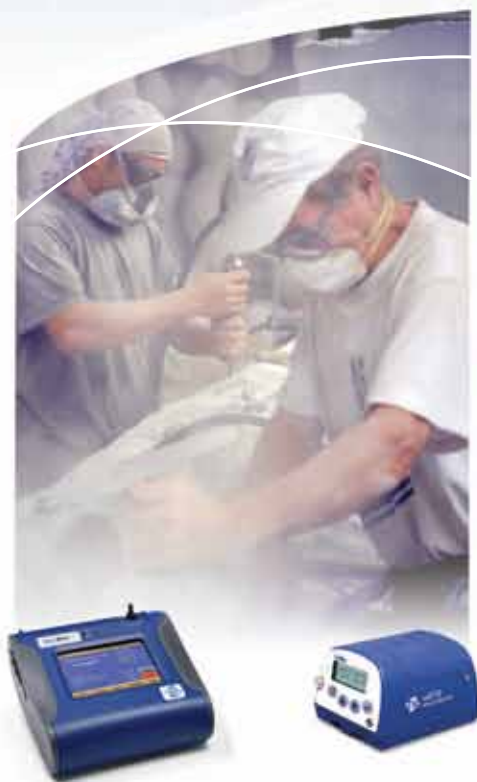
All donors are automatically entered into a daily drawing for cash prizes of \$100, \$50 and \$25.  
Swipe your Expocard at the door.

A special Grand Prize will be awarded to one lucky individual if total donations exceed 129 pints –  
the standing record donated at AIHce 2007. Winners will be notified by email.



# Real-Time Solutions for Industrial Hygiene Professionals

The full line of TSI health and safety instruments are designed to accurately and reliably measure a wide variety of industrial hygiene parameters.



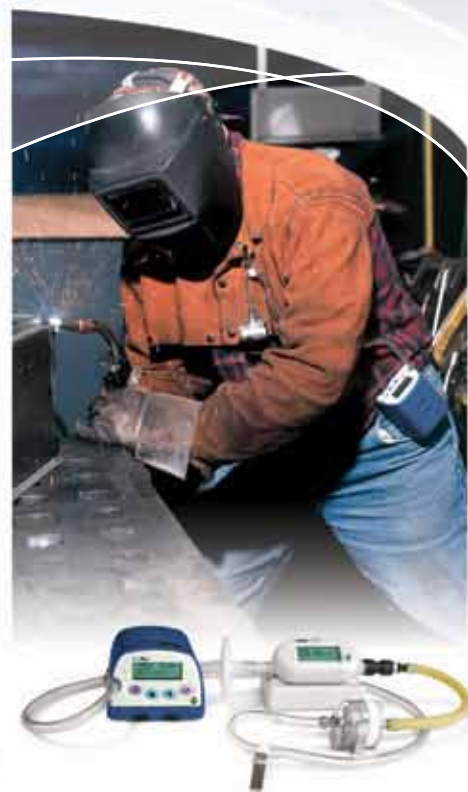
## DUSTTRAK™ & SIDEPAK™ Aerosol Monitors

- Battery operated, data-logging, light scattering laser photometers
- Ideal for personal exposure (AM510) and workplace (DUSTTRAK) monitoring
- Real-time mass concentration readings
- Measures aerosol contaminants such as dust, smoke, fumes and mists



## PORTACOUNT® PRO and PRO+ Respirator Fit Testers

- Real-time fit factor for training on proper donning procedures and ensuring fit prior to testing
- Easy, stand alone operation with touch screen interface
- OSHA-compliant to fit test all types of respirators
- Trustworthy results with a quantifiable fit factor reading



## Primary Calibrators

- Volumetric flow rate displayed continuously for real-time adjustments
- Battery powered, compact and lightweight
- Field portable—use the same primary calibrator for adjustment, calibration and periodic checks
- Accurate to +/- 2% of reading

**VISIT TSI at AIHce 2012, TSI booth #700.**

# It's All Happening at AIHA!

## Booth #922

Take advantage of 15% off all AIHA publications and education, including these new titles debuting at AIHce:

- Engineering Reference Manual, 3rd edition
- 2012 ERPG/WEEL Handbook
- 2012 ERPG Update Set
- 2012 Emergency Response Guidebook

**Don't want to carry heavy books around?  
Have your purchase shipped — FOR FREE!**

## PLUS

Learn more about the Product Stewardship & Sustainability Network;  
Find out if you're a dart-throwing monkey;  
Experience the convenience and portability of PDF publications;  
Take a sneak-peek at upcoming AIHA conferences;  
*...And much more!*

**ALL AT THE AIHA BOOTH!**  
**It's the place to be!**





## Monday, June 18

7:00 a.m.–8:00 a.m.

AIHce First Time Attendee Orientation  
ICC, 202

7:00 a.m.–5:30 p.m.

Registration  
ICC, Wabash Lobby

7:30 a.m.–11:30 a.m.

Speaker Ready Room  
ICC, 108

7:30 a.m.–4:00 p.m.

Volunteer Collaboration Café  
ICC, Crossroads Lobby

7:30 a.m.–5:00 p.m.

Press Room  
ICC, 112

8:00 a.m.–9:30 a.m.

### Opening General Session



**The Future: Life Sciences and the Knowledge Economy**  
**Juan Enriquez**  
Synthetic Genomics Inc.;  
Excel Venture Management  
Boston, MA  
ICC, Sagamore Ballroom

8:00 a.m.–4:00 p.m.

CareerAdvantage Development Fair 2012  
ICC, 105

9:00 a.m.–4:00 p.m.

Volunteer Red Carpet Club  
ICC, 111

9:00 a.m.–2:00 p.m.

Annual Blood Drive  
ICC, 110

9:00 a.m.–5:30 p.m.

### Visit the Expo!

ICC, Halls A–E

Passport to Prizes, Text to Win Promo, Special Displays, Cyber Centers, Restaurants, Lounges, Expo Theater

No sessions 9:30 a.m.–10:30 a.m. and 12:30 p.m.–2:00 p.m.

### Poster Sessions

ICC, Expo, Hall B

#### Poster Session 401

Authors present 10:00 a.m.–Noon

#### Poster Session 402

Authors present 2:00 p.m.–4:00 p.m.

### Note Meeting Rooms ...

ICC = Indiana Convention Center

AIHce Mobile App Help Desk  
ICC, Wabash Lobby

10:00 a.m.–11:00 a.m.

CR 301 Innovative Approaches to Eliminating Accidents and Fatalities Inside Confined Spaces and During Use of Inert Gases at Construction Sites  
ICC, 120

CR 302 Mission Possible: Creating Top Gun Safety Leaders  
ICC, Wabash 3

10:00 a.m.–11:30 a.m.

Welcome Brunch, "A Hoosier Hello"  
(Admission by ticket)  
JW Marriott, Grand Ballroom 4

10:00 a.m.–2:00 p.m.

Exhibitor Product Demos and Presentations  
Expo Theater, Hall C  
See presentation descriptions on pages 32 and 36.

10:30 a.m.–12:30 p.m.

Ask the Expert With Dr. David Michaels, PhD, MPH  
ICC, Wabash 1

PO 101 Exposure Assessment Methodologies – Part 1  
ICC, 240

PO 102 Indoor Environmental Quality – I  
ICC, 122

PO 103 Laboratories, Analytical and Research  
ICC, 202

RT 201 Mock OSHRC Hearing: Multi-Employer Work Site Liability for Health and Safety Consultants  
ICC, Wabash 2

RT 202 Nonionizing Radiation in Health Care Settings  
ICC, 205

RT 203 What is 85/3, and Why Noise Is More Hazardous Than You Think  
ICC, 125

10:30 a.m.–1:00 p.m.

RT 204 Oh, The Places You'll Go! Perspectives on IH Career Paths  
ICC, 102

RT 205 Sustainable Operations and Practices in Lab Environments  
ICC, 127

RT 206 Ask NIOSH Experts: Practical Advice and Lessons from Nanotechnology Field Assessments  
ICC, 243

11:30 a.m.–12:30 p.m.

CR 303 Gearing up for the Revised NFPA 70E (2012 Edition) Electrical Safety/Arc Flash Requirements  
ICC, 103

CR 304 TOR –A Better Way to Investigate Accidents  
ICC, Wabash 3

CR 305 Your Supplier Communication Program for Risk Management  
ICC, 120

12:30 p.m.–2:00 p.m.

IH Mysteries Workshop  
ICC, 212

12:30 p.m.–5:30 p.m.

Social Tour: Indianapolis Indeed!  
JW Marriott, Bus departs Event Entrance, Level 1

12:30 p.m.–5:30 p.m.

Speaker Ready Room  
ICC, 108

1:00 p.m.–2:00 p.m.

Jeffrey S. Lee Lecture  
ICC, 122

Luncheon Discussions: Student and Early Career Professionals  
ICC, Expo, Hall B

Luncheon Discussions: Product Stewards  
ICC, Expo, Hall B

1:30 p.m.–4:30 p.m.

TT-01 Eli Lilly & Company  
ICC, Bus departs Maryland Entrance; board by 1:15 p.m.

2:00 p.m.–3:00 p.m.

CR 306 The Criticality of Understanding Potential  
ICC, 103

CR 307 The Synergy of Environmental Health and Safety and Sustainability  
ICC, 202

2:00 p.m.–4:30 p.m.

RT 207 Effective Adult SH&E Training Techniques: Back to the Basics  
ICC, 203

RT 208 Leaders and Legends in Ergonomic Modeling  
ICC, Wabash 2

2:00 p.m.–4:40 p.m.

PO 104 Exposure Assessment Standards and Challenges  
ICC, 120

PO 105 Nanotechnology: Assessment and Control  
ICC, 240

PO 106 Socio-Legal and Regulatory Aspects of IH Practice  
ICC, Wabash 1

2:00 p.m.–5:00 p.m.

RT 209 Human Biological Monitoring: State of the Art  
ICC, 127

RT 210 Perspectives of Preparation for the CIH Exam v6.0  
ICC, 102

RT 211 Update on Health Effects Research and Guidelines on Mold, Moisture and Damp Buildings  
ICC, 125



2:00 p.m.–5:10 p.m.

PO 107 Aerosols  
ICC, Wabash 3

2:00 p.m.–5:30 p.m.

RT 212 Implementing Engineering Controls in Construction  
ICC, 243

SS 001 Science Symposium: Closer to Spock's Tricorder – The Latest in Real-Time Detection  
ICC, 205

3:30 p.m.–4:30 p.m.

CR 308 How to Build a Health and Safety Culture through PDCA (Plan–Do–Check–Act) Approach  
ICC, 103

CR 309 ISO 14001, Lean and Six Sigma Sustainability Programs  
ICC, 202

4:00 p.m.–5:30 p.m.

## Expo Opening Cocktail Reception

ICC, Expo, Halls A–E

This is the perfect opportunity to meet this year's exhibitors, browse the technical posters, visit with colleagues and learn about new products and services from AIHA® and ACGIH®.

## ACGIH®

10:30 a.m.–Noon

FOHS Board of Trustees Meeting  
ICC, Conference Room East

## AIHA®

8:00 a.m.–1:00 p.m.

AIHA Registry Programs Competency Assessments  
JW Marriott, 101

10:00 a.m.–11:00 a.m.

Yellow Council Meeting  
JW Marriott, 106

10:00 a.m.–Noon

Environmental Issues SIG Meeting  
JW Marriott, 107

Exposure Assessment Strategies Committee Meeting  
JW Marriott, White River Ballroom B

Ionizing Radiation Committee Meeting  
JW Marriott, 105

Management Committee Meeting  
JW Marriott, White River Ballroom D

Real-Time Detection Systems Committee Meeting  
JW Marriott, White River Ballroom C

Value Strategy Committee of the Academy Meeting  
JW Marriott, 102

10:30 a.m.–12:30 p.m.

ANSI/AIHA Z9.12 Subcommittee Meeting  
JW Marriott, 206

11:00 a.m.–1:00 p.m.

Guideline Foundation Board Meeting  
JW Marriott, 109

12:30 p.m.–1:30 p.m.

Academy Conference Team Meeting  
ICC, Conference Room West

12:30 p.m.–2:00 p.m.

SDS and Label Authoring Registry SME Team Meeting  
ICC, 210

1:00 p.m.–5:30 p.m.

SDS and Label Authoring Registry Assessment  
JW Marriott, 101

1:30 p.m.–3:30 p.m.

Protective Clothing and Equipment Committee Meeting  
JW Marriott, 103

Risk Assessment Committee Meeting  
JW Marriott, 104

Safety Committee Meeting  
JW Marriott, 102

Toxicology Committee Meeting  
JW Marriott, 107

2:00 p.m.–4:00 p.m.

ANSI/AIHA Z9 Ventilation System Standards Committee Meeting  
JW Marriott, 206

Finance Committee Meeting  
ICC, 211

2:00 p.m.–6:00 p.m.

International Affairs Committee Meeting  
JW Marriott, White River Ballroom G

3:30 p.m.–4:30 p.m.

Blue Council Meeting  
JW Marriott, 105

3:30 p.m.–5:30 p.m.

Confined Spaces Committee Meeting  
JW Marriott, White River Ballroom C

Health Care Working Group Meeting  
JW Marriott, White River Ballroom I

Indoor Environmental Quality SIG Meeting  
JW Marriott, 104

Noise Committee Meeting  
JW Marriott, White River Ballroom D

Nonionizing Radiation Committee Meeting  
JW Marriott, 106

Stewardship and Sustainability Committee Meeting  
JW Marriott, White River Ballroom B

4:30 p.m.–5:30 p.m.

Indigo Council Meeting  
JW Marriott, 103

6:00 p.m.–8:00 p.m.

Mentoring Program Networking Event  
Indianapolis Colts Grille,  
110 W. Washington Street

6:30 p.m.–8:00 p.m.

International Reception (by invitation)  
JW Marriott, White River Ballroom F

## Ancillary

4:30 p.m.–6:30 p.m.

University of California, Berkeley – School of Public Health  
JW Marriott, 301

5:00 p.m.–9:00 p.m.

Department of Energy (DOE) and DOE Contractor Industrial Hygiene Meeting  
JW Marriott, 303

5:30 p.m.–7:30 p.m.

University of Minnesota School of Public Health's Industrial Hygiene Reunion  
Harry & Izzy's, 153 S. Illinois Street

5:30 p.m.–8:30 p.m.

EMSL Client Appreciation Reception (by invitation)  
Indiana State Museum

6:00 p.m.–8:00 p.m.

Harvard University Reception  
JW Marriott, 308

6:30 p.m.–8:00 p.m.

Johns Hopkins University Reception  
JW Marriott, 306

## First Time Attending AIHce?

Join us for an AIHce orientation session.

7:00 a.m.–8:00 a.m. ➤ ICC, 202

- Meet other first-time conference-goers
- Learn how to effectively use the Final Program as your conference guidebook
- Discover the best networking events that can lead to meeting valuable contacts
- Learn about the on-site resources and what they can do for you
- Hear tips on how to maximize your overall conference experience

# » Monday, June 18

**OPENING GENERAL SESSION: 8:00 A.M.–9:30 A.M.**  
**ICC, SAGAMORE BALLROOM**



## The Future: Life Sciences and the Knowledge Economy

**Juan Enriquez**, Co-founder, Synthetic Genomics Inc., Managing Director, Excel Venture Management, Boston, MA

Juan Enriquez is a unique individual who lives in the future and works on the cutting edge of discovery. His company, Synthetic Genomics, is developing breakthrough genomic-driven solutions for major global issues.

A sought-after speaker for his insightful and illuminating presentations, Enriquez's work has appeared in the *Harvard Business Review*, *Foreign Policy*, *Sciences*, and *The New York Times*. He is the author of several books, including the global best seller, *As the Future Catches You: How Genomics & Other Forces Are Changing Your Life, Work, Health & Wealth*.

The genetic revolution and other technologies will have unprecedented political, ethical, economic, and financial impacts on almost every workplace. Gene data is already transforming how several major industries do business. At AIHce, Enriquez maps out how these extraordinary discoveries and applications will impact OEHS professionals.

### Showtime

**7:45 a.m.**

#### The Flashbacks of Purdue University

Listen to the funk of disco and the attitude of the 80's with rockin' harmonies that will have you singing along.



### Exhibitor Product Demos and Presentations

10:00 a.m.–1:00 p.m. » ICC, Expo Theater, Hall C

**10:00 a.m.**

#### iNet DS Mobile Solution, Industrial Scientific Corporation

The iNet DS Mobile Solution is the complete wireless solution for instrument management. The iNet DS Mobile bundle allows instruments to be docked, tested, and calibrated with data sent to iNet Control from any location, any time, with nothing more than a simple 3G wireless connection. Attendees will learn how to gain the advantages of iNet to enhance their gas detection program in even the most remote monitoring applications.

**10:30 a.m.**

#### PhaseCore Heat Activated Cooling Products: SWEDE CarbonX Vest in Action, First Line Technology, LLC

SWEDE CarbonX Cooling Vests are the best solution to reduce and combat heat stress in electrical and fire hazard environments where flammability protection is required. CarbonX Cooling Vests use PhaseCore, a phase change material, to provide a cooling effect to the body's core, and CarbonX is flame retardant.

**11:30 a.m.**

#### Learn How to Perform Safety Inspections Faster and More Efficiently with ChemSW's New SI Live™ Solution, ChemSW Inc.

New safety inspection solutions allow you to use a mobile device to perform data acquisition, eliminate transcription errors and automate reporting. Inspect, track, and report anything at your site. Learn how ChemSW's unique new solution lets you manage inspection programs online; use common mobile devices such as

iPhones®, iPads®, and, Androids™ to record your inspection observations; and then upload the data automatically into the SI Live database for reporting. It's fast, simple, and accurate.

**Noon**

#### Gasmet Model DX-4040 Portable FTIR Gas Analyzer Identifies "Unknown" Toxic Gases in Emergency Response, Hazmat, and Workplace IH Monitoring Applications, Gasmet Technologies Inc.

The Model DX4040 portable FTIR gas analyzer can identify "unknown" gases within minutes of arriving at the site by searching the NIST/EPA® reference library of over 5000 gases. Measuring 25 gases simultaneously at sub-ppm levels, the DX4040 is also a cost-effective solution for performing workplace exposure assessments at hospitals, chemical plants, remediation sites, and universities.

**12:30 p.m.**

#### NEW! 3M™ Sound Examiner SE-400 Sound Level Meter with NEW! 3M Detection Management Software DMS, Quest Technologies, a 3M company

The Sound Examiner SE-400 series of sound level meters are engineered to accurately measure noise levels in highly variable environments. These advanced instruments compute the average sound pressure level (Leq/Lavg) over run time, helping you to more accurately assess occupational and environmental noise levels. The Sound Examiner uses 3M Detection Management Software DMS. A DMS CD is shipped free of charge with SE-400 Series meters and all new 3M Quest data logging instruments purchased through June 30, 2012.

## CR 301

### Innovative Approaches to Eliminating Accidents and Fatalities Inside Confined Spaces and During Use of Inert Gases at Construction Sites

10:00 a.m.-11:00 a.m. » ICC, 120

**Presenter:** C. Penniall, ExxonMobil, Singapore.

**Monitor:** F. Boachie, University of Cincinnati, Cincinnati, OH.

Program will present unique approaches to the management of inert gases and confined spaces at civil / structural construction sites. Accidents and fatalities within confined and enclosed spaces frequently result from the presence of a hazardous atmosphere and a lack of hazard awareness and field recognition. Innovative training, use of field equipment, risk-based review of work activities, and application of field assessment process will be reviewed. The author is currently working at an international construction site with 22,000+ workers.

## CR 302

### Mission Possible: Creating Top Gun Safety Leaders

10:00 a.m.-11:00 a.m. » ICC, Wabash 3

**Presenter:** C. Brudecki, Navarro Research and Engineering, Inc., Oak Ridge, TN. **Monitor:** S. Jackson, U.S. Department of the Interior, Washington, DC.

The Mission Possible: ZERO Program is a surefire way to achieve worker participation in your safety program. You can learn to create, maintain, and improve your safety culture and performance metrics by teaching personnel to become part of the injury prevention team. Personnel take ownership of the safety program and make a personal commitment to become safety leaders. You will learn about "Wingfest," becoming a good wingman, and, ultimately, becoming a top gun safety leader.

## Special Session

### Ask the Expert With Dr. David Michaels, PhD, MPH

10:30 a.m.-12:30 p.m. » ICC, Wabash 1

**Moderator:** A. Fleeger, ExxonMobil Chemical Company, Houston, TX. **Monitor:** M. Finucane, University of Pennsylvania, Philadelphia, PA.

Dr. David Michaels, Assistant Secretary of Labor for OSHA, will provide an update on OSHA activities and then open the floor to questions from the audience.

## PO 101

### Exposure Assessment Methodologies — Part 1

10:30 a.m.-12:30 p.m. » ICC, 240

**Arranger:** M. Vadali, University of Minnesota, Brooklyn Park, MN. **Moderator:** C. Richard, Medical Science Associates, Columbia, MD. **Monitors:** C. Simmons, ENVIRON, Chicago, IL; R. Rogers, U.S. Army, Bel Air, MD.

10:30 a.m.-10:50 a.m.

**SR-101-1 Occupational Exposure Modeling Uncertainty Investigation with Monte Carlo Simulation.** K. Czarnocki, B. Wit, E. Czarnocka, Lublin University of Technology, Lublin, Poland; J. Nowak, A. Kuczumow, John Paul II Catholic University, Lublin, Poland; S. Mankiewicz, St. Johns' Regional Oncology Center, Lublin, Poland.

10:50 a.m.-11:10 a.m.

**SR-101-2 A Graphical Explanation of When to Use Frequentist, Maximum Likelihood, or Bayesian Analysis for Air Sampling Data.** J. Rock, TUPE, Inc., Bryan, TX.

11:10 a.m.-11:30 a.m.

**SR-101-3 Reconstructing Exposures (1973-2010) to Elongated Mineral Particles (EMPs) on Minnesota's Iron Range Based on Different Size-Based Definitions.** J. Hwang, G. Ramachandran, P. Raynor, B. Alexander, J. Mandel, University of Minnesota, Minneapolis, MN.

11:30 a.m.-11:50 a.m.

**SR-101-4 Using Computational Fluid Dynamics (CFD) to Assist in the Determination of Sample Placement with Respect to Topographic Features for Airborne Outdoor Dust Exposure Assessment.** D. Hall, C. Strode, E. Rasmuson, J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

11:50 a.m.-12:10 p.m.

**SR-101-5 Characterization of Formaldehyde Exposure Resulting from the Use of Four Professional Hair Straightening Products.** J. Pierce, A. Abelman, L. Spicer, R. Adams, ChemRisk, Chicago, IL; B. Finley, S. Gaffney, ChemRisk, San Francisco, CA.

12:10 p.m.-12:30 p.m.

**SR-101-6 Confidence Limits for the Symmetric-Range Accuracy.** K. Krishnamoorthy, University of Louisiana at Lafayette, Lafayette, LA.

## PO 102

### Indoor Environmental Quality — I

10:30 a.m.-12:30 p.m. » ICC, 122

**Arranger:** J. Hicks, Exponent, Inc., Oakland, CA. **Moderator:** L. Rogers, Mycometer, Tampa, FL. **Monitors:** D. Peters, Environmental Health Management, Louisville, KY; A. Relyea, The Hartford Insurance Co.

10:30 a.m.-10:50 a.m.

**CS-102-1 Choosing the Appropriate Spore Trap Sampler: Do Efficiency Differences Matter?** H. Burge, EMLab P&K, San Bruno, CA.

10:50 a.m.-11:10 a.m.

**CS-102-2 An Examination of the EPA's Environmental Relative Moldiness Index (ERMI).** P. Rey, J. Hicks, Exponent, Inc., Oakland, CA.

11:10 a.m.-11:30 a.m.

**CS-102-3 What Levels of Culturable Fungi and Bacteria in Carpet Dust Are Reasonable?** K. Candee, D. Havick, EMC Insurance Companies, Des Moines, IA.

11:30 a.m.-11:50 a.m.

**CS-102-4 Variables Affecting the Interpretation of Dust Sampling Data.** H. Burge, EMLab P&K, San Bruno, CA.

11:50 a.m.-12:10 p.m.

**SR-102-5 Evaluation of Elevator Shafts as a Pathway for Fungal Spores and Particles to Enter a Hospital Housing Immuno-compromised Patients.** M. Berkheiser, University of Texas, Houston, TX.

12:10 p.m.-12:30 p.m.

**CS-102-6 Bioaerosol and Related Environmental Factors at University Laboratories.** S. Hwang, D. Park, Y. Ko, C. Hwang, Seoul National University, Seoul, Republic of Korea; I. Lee, Inha University, Incheon, Republic of Korea.

## PO 103

### Laboratories, Analytical and Research

10:30 a.m.-12:30 p.m. » ICC, 202

**Arranger:** M. Miller, Quantico, VA. **Moderator:** L. Poore, University of Kentucky, Lexington, KY. **Monitors:** C. Peart, Merck, West Point, PA; J. Nesbitt, Mayo Clinic, Rochester, MN.

10:30 a.m.-10:50 a.m.

**CS-103-1 Implementation of High-Hazard Operating Procedures for Highly Hazardous Substances in Chemical Laboratories.** M. Brinton, Weill Cornell Medical College, New York, NY.

10:50 a.m.-11:10 a.m.

**SR-103-2 Detection of Micro-Holes and Tears in Disposable Nitrile Gloves.** A. Mathews, S. Que Hee, University of California, Los Angeles, CA.

11:10 a.m.-11:30 a.m.

**CS-103-3 Development of Statewide Consensus Safety Guidelines for Nanomaterials Research in California.** L. Gibbs, M. Dougherty, Stanford University, Stanford, CA.

Please turn off cell phones in all sessions.



11:30 a.m.–11:50 a.m.

**SR-103-4 Permeation of Benzyl Alcohol Through Disposable Nitrile Gloves.** S. Takaku-Pugh, S. Que Hee, University of California, Los Angeles, CA.

11:50 a.m.–12:10 p.m.

**CS-103-5 Get Informed with QR Codes.** M. Markopoulos, J. Whitlock, Wright State University, Dayton, OH.

12:10 p.m.–12:30 p.m.

**CS-103-6 Simplifying Routine Inspections of Safety Showers and Eyewashes.** D. Anderson, L. Tomaras, D. Lillquist, OSHA, Sandy, UT.

## RT 201

### Mock OSHRC Hearing: Multi-Employer Work Site Liability for Health and Safety Consultants

10:30 a.m.–12:30 p.m. » ICC, Wabash 2

**Arranger:** B. Miller, North Wind, Inc., Idaho Falls, ID. **Moderator:** S. Celly, Celly Services, Inc., Long Beach, CA. **Monitors:** J. Unmack, Unmack Corporation, San Pedro, CA; D. Napier, DNA Industrial Hygiene, Lawndale, CA.

On completion, participant will be able to:

- Define the creating, exposing, correcting, and controlling employer as it relates to hazards at a multi-employee work site
- Understand the controlling employer's responsibility to exercise reasonable care to prevent and detect violations on the multi-employer work site
- Review through a mock trial case and exercise, examples of controlling employer's liability with respect to their subcontractor's violations under the Occupational Health and Safety (OSHA) CPL 2-0.124, Multi-Employer Citation Policy
- Understand the Occupational Safety and Health Review Commission (OSHRC) "Solis v. Summit Contractors, Inc." decision as well as the U.S. Court of Appeals for the Eighth Circuit decision that vacated, as it existed for over 30 years, the multi-employer citation policy that allowed OSHA to issue a citation to any employer who was the creating employer (creating the hazardous condition), correcting employer (responsible for correcting a hazard, i.e., given the responsibility of installing and/or maintaining particular safety/health equipment or devices), controlling employer (has general supervisory authority over the work site, including the power to correct safety and health violations or require others to correct them), or the exposing employer (employer whose employees are exposed to the hazard). As a result, general contractors on construction sites could receive OSHA citations as a controlling employer for a subcontractor's violation even if none of the general contractor's employees was exposed to the cited safety hazard and the general contractor neither created the hazard nor was required to correct it. This hybrid mock Occupational Safety and Health Review Commission (OSHRC) hearing explores the complex issues that may arise from a multi-employer work site with an OSHA Compliance officer and the construction business owner cited for OSHA violations acting

as testifying witness. Attorneys acting in the roles of both Secretary of Labor and defense attorneys direct and cross-examine the defendant and plaintiff witnesses. Workshop attendees serve as OSHRC judges and determine the hearing decision. Following the hearing, key multi-employer legal issues are discussed and related exercises completed, along with participants' questions and open discussion of OSHA multi-employer citation topic.

- **Mock OSHRC Hearing: Multi-Employer Work Site Liability for Health and Safety Consultants and Employers (Plaintiff Attorney).** B. Miller, North Wind, Inc., Idaho Falls, ID.
- **Mock OSHRC Hearing: Multi-Employer Work Site Liability for Health and Safety Consultants and Employers (Defendant Attorney).** S. Celly, Celly Services, Inc., Long Beach, CA.
- **Mock OSHRC Hearing: Multi-Employer Work Site Liability for Health and Safety Consultants and Employers (OSHA Officer).** E. Erikson, Guida, Slavich & Flores, Dallas, TX.
- **Mock OSHRC Hearing: Multi-Employer Work Site Liability for Health and Safety Consultants and Employers (OSHRC Judge).** M. Norman, Law Offices of Margaret Norman, Manhattan Beach, CA.
- **Mock OSHRC Hearing: Multi-Employer Work Site Liability for Health and Safety Consultants and Employers (Defendant).** S. Sherman, U.S. Department of State, Washington, DC.

## RT 202

### Nonionizing Radiation in Health Care Settings

10:30 a.m.–12:30 p.m. » ICC, 205

**Arranger and Moderator:** S. Shindel, Intel Corporation, Chandler, AZ. **Monitors:** D. Zabel, Hollowtop Applied Industrial Hygiene, Pasco, WA; A. Butler, Butler Health and Safety, Inc., San Pedro, CA.

Use of nonionizing radiation is increasing in health care settings. NIR is used for therapeutic and diagnostic purposes, such as lasers used in surgery and dental procedures. In addition, exposure to NIR is a concern to patients with embedded medical devices who may need to avoid high EMF areas or change work practices. This roundtable will address several topics relevant to IHs in general practice and in the health care industry.

- **Lasers in Health Care, Hazards and Controls.** K. Merritt, Mainthia Technology, Inc., Virginia Beach, VA.
- **Electromagnetic Fields: How They Affect Employees with a Pacemaker or Defibrillator.** S. Bagley, EMF Testing USA, Fishers, IN.
- **Optical Radiation Hazards in Dental Care.** M. Phillips, K. Graziano, University of Oklahoma, Oklahoma City, OK.
- **Evaluation and Control of Germicidal Ultraviolet Radiation in Health Care.** T. Fuller, Illinois State University, Bloomington, IL.

## RT 203

### What Is 85/3, and Why Noise Is More Hazardous Than You Think

10:30 a.m.–12:30 p.m. » ICC, 125

**Arranger:** J. Ratliff, Kanto Corporation, Portland, OR. **Moderator:** R. Godwin, U.S. Navy, Washington, DC. **Monitors:** R. Godwin, U.S. Navy, Washington, DC; T. Chang, Kanto Corporation, Beaverton, OR.

There is a movement nationally for companies to adopt the concept of an 85 dBA criterion level for 8-hour exposures, and a 3 dB doubling rate. This session will explore these concepts, which are used worldwide except in the USA, and new research on why noise is more hazardous than you think. Hearing conservation programs are set up on baseline and annual audiograms, but new research shows that even with no decrement in an audiogram, there can be nerve damage that manifests itself in other ways. By incorporating the 85/3 concept, the work force will be substantially more protected from occupational noise exposure.

- **What Is the 85/3 Concept?** J. Ratliff, Kanto Corporation, Portland, OR.
- **When the Exchange Rate Makes a Difference – Noise Monitoring of Traffic Police in Kathmandu Valley, Nepal.** W. Carter, University of Findlay, Findlay, OH.
- **Adding Insult to Injury: Cochlear Nerve Degeneration After "Temporary" Noise-Induced Hearing Loss.** S. Kujawa, Harvard University, Boston, MA.
- **The 85/3 Concept – What We Hope to Accomplish.** W. Clark, Washington University, St. Louis, MO.

## RT 204

### Oh, the Places You'll Go! Perspectives on IH Career Paths

10:30 a.m.–1:00 p.m. » ICC, 102

**Arranger:** C. Hovde, Caterpillar, Roseville, MN. **Moderator:** W. Cyrs, ChemRisk LLC, San Francisco, CA. **Monitors:** T. Huynh, University of Minnesota, Minneapolis, MN; T. Carmody, 3M, St. Paul, MN.

Young industrial hygienists are entering the career with many great opportunities to make a positive difference in the lives of workers. The problem they face is deciding what direction to go and how that direction will impact future career options. While the various options are exciting and challenging, they may not be the right fit for everyone. The speakers will give examples and practical tips on the culture, opportunities, benefits/drawbacks of their five organizations to help young hygienists make informed decisions about prospective career paths. Panel members will include government enforcement, NASA, loss control, consulting, and industry. Attendees will gain ideas on where to start their careers or where they want to go next and will also be given the opportunity to share success

stories with students and early career professionals in attendance.

- **You're Off to Great Places! You're Off and Away! How About Helping Your Country Explore Space Today?** A. Windau, NASA, Cleveland, OH.
- **OSHA: Navigating Through Challenges; Diverse Opportunities on How You Can Make a Positive Impact.** C. Lorenzo, OSHA, Denver, CO.
- **Industrial Hygiene Careers in Consulting.** R. Pearson, Environmental Health & Safety, Inc., St. Paul, MN.
- **Assessing Risk of Loss by Focusing on Analysis of Risks Rather Than a Specific Incident.** D. Boyd, Liberty Mutual, Wausau, WI.
- **A Glimpse of IH Career and Skills in Industry.** H. Harapan, 3M, St. Paul, MN.

## RT 205

### Sustainable Operations and Practices in Lab Environments

10:30 a.m.–1:00 p.m. » ICC, 127

**Arrangers:** M. Ochs, Arizona State University, Tempe, AZ; A. Lehoczy, University of Georgia, Atlanta, GA. **Moderator:** A. Lehoczy, University of Georgia, Atlanta, GA. **Monitors:** J. Lemanski, Arizona State University, Tempe, AZ; J. Peters, Brookhaven National Lab, Upton, NY.

How should your organization decide which measures to take for resource conservation of a laboratory facility? What roles can the industrial hygienist take in determining and promoting safe and sustainable practices? This session will provide information on these topics and include ideas to consider at your facility. Laboratory environments present a host of opportunities and challenges for energy and resource conservation. Typical laboratories may consume 5–7 times more energy than traditional office buildings. To assist in addressing how to deal with increasing energy costs and energy consumption, employers must design increasingly efficient laboratory buildings. We will examine available technologies and share operational components for managing a laboratory conservation program.

- **Implementation of Sustainable Lab Programs.** M. Ochs, Arizona State University, Tempe, AZ.
- **Quantifying Demand-Based Control's Substantial Lab Building Energy Reduction.** G. Sharp, Aircuity, Inc., Newton, MD.
- **Laboratory Sustainability in a Corporate Environment.** H. Partlowe, Henkel/Dial, Scottsdale, AZ.
- **Evolution of the Fume Hoods.** L. Savage, Labconco Corporation, Kansas City, MO.
- **Laboratory Ventilation Standards Z9.5 and ASHRAE's Method of Testing Performance of Laboratory Fume Hoods (Std 110).** G. Knutson, Knutson Ventilation, Inc., Edina, MN.

## RT 206

### Ask NIOSH Experts: Practical Advice and Lessons from Nanotechnology Field Assessments

10:30 a.m.–1:00 p.m. » ICC, 243

**Arranger and Moderator:** C. Geraci, NIOSH, Cincinnati, OH. **Monitors:** C. Beaucham, C. Sparks, NIOSH, Cincinnati, OH.

NIOSH continues as the lead agency in the U.S. responsible for conducting research and making occupational safety and health recommendations for nanotechnology. Knowledge gained from field investigations has served as the basis for developing guidance for evaluating and controlling worker exposure to nanomaterials. Since 2005, NIOSH has provided the AIHA membership with updates on research results. In response to strong feedback from the 2011 AIHce session, NIOSH will modify the format for 2012 to have a minimum of prepared presentations to maximize the opportunity for open discussion. The focus will be on practical approaches based on lessons learned from conducting field investigations over the past 24 months. Emphasis will be on how to use key information and research results to conduct industrial hygiene assessments of nanomaterial processes. Information will be drawn from the following NIOSH research areas: Toxicology — using the latest information on emerging nanomaterials; Exposure Assessment — building a strategic approach; Controls — engineering controls, protective equipment, and respiratory protection; Risk Management — using evolving models; and Strategic Planning — looking to the future.

- **Nanomaterials Toxicology — Key Results from Inhalation and In Vitro Studies.** V. Castranova, NIOSH, Morgantown, WV.
- **Exposure Assessments — Status of the NIOSH Carbon Nanotube Industrywide Study.** M. Dahm, NIOSH, Cincinnati, OH.
- **Exposure Assessments — Update on Strategic Approaches.** K. Martinez, NIOSH, Cincinnati, OH.
- **Risk Assessment Approaches for Nanomaterials.** D. Heidel, NIOSH, Cincinnati, OH.
- **Engineering Controls for Nanomaterial Processes and Tasks.** K. Dunn, NIOSH, Cincinnati, OH.
- **Advances in Personal Protective Equipment, Clothing, and Respiratory Protection.** R. Shaffer, NIOSH, Pittsburgh, PA.
- **An Overview of the NIOSH Nanotechnology Strategic Plan.** L. Hodson, NIOSH, Cincinnati, OH.

## CR 303

### Gearing Up for the Revised NFPA 70E (2012 Edition) Electrical Safety/Arc Flash Requirements

11:30 a.m.–12:30 p.m. » ICC, 103

**Presenter:** P. Zoubek, Zoubek Consulting, LLC, San Diego, CA. **Moderator:** S. Eversmeyer, Port of Portland, Portland, OR. **Monitor:** S. Fess, Xerox Corporation, Webster, NY.

NFPA 70E (Standard for Electrical Safety in the Workplace) is a global consensus that has provided guidance on worker safety from shock and arc flash hazards since 1976. In late 2011, NFPA released the 2012 Edition of NFPA 70E. The 2012 standard includes revisions to hazard risk category tables, new PPE requirements, frequency requirements for electrical safety program auditing and qualified person training, and revisions to electrical safety program implementation. The revised standard with comparisons to previous editions is outlined.

## CR 304

### TOR — A Better Way To Investigate Accidents

11:30 a.m.–12:30 p.m. » ICC, Wabash 3

**Presenter:** D. Weber, Safety Awakenings LLC, Schofield, WI. **Monitor:** C. Linder, St. Louis, MO.

TOR (Technic of Operations Review) Analysis is a management tool used to identify operational errors that lead to accidents. Originally developed in 1973 by D.A. Weaver, TOR has been used to investigate catastrophes, injury accidents, occupational illnesses, and environmental spills. Recently, the presenter has been working with D. A. Weaver to develop an updated version of TOR. Attendees will learn the 2012 TOR analysis process and will receive the instructions and forms needed to apply it in their workplace.

## CR 305

### Your Supplier Communication Program for Risk Management

11:30 a.m.–12:30 p.m. » ICC, 120

**Presenters:** K. Bubeck, Ithos Global, Troy, NY; J. Hellerstein, MeadWestVaco Packaging, Richmond, NH.

Gathering data on chemicals in product ingredients is one thing. The next step is to then take that chemical-level product data and screen it against known toxins; suspected toxins; and all environmental, health, and safety regulatory lists from all parts of the globe. What's the best way to do it?

**Exhibitor Product Demos and Presentations**

1:00 p.m.-2:00 p.m. » ICC, Expo Theater, Hall C

**1:00 p.m.****A New Active Dry Sampler for Low Level Vapor Phase and Particulate Isocyanate Measurements, Supelco, Supelco/Sigma-Aldrich**

Supelco will demonstrate a new active sampling device for low level measurement of diisocyanates. The device is a two-part impregnated filter sampling system that does not require any field reagent addition or field desorption. The device can be used with most sampling pumps. It offers the ease of use of traditional active sampling devices and the ultra-sensitivity of LC-MS/MS and LC-MS instrumentation. Both the sampling device and the analytical protocol will be presented.

**1:30 p.m.****Portable, Continuous Measurement Formaldehyde Monitor for IAQ Applications, GrayWolf Sensing Solutions**

Introducing GrayWolf's FM-801 formaldehyde meter which optically detects the discoloration of a chemically impregnated porous glass cartridge when exposed to HCHO. It "re-zeros" after each 30 minute test. Range is <20ppb up to 1ppm. For low-range measurements, typical of IAQ applications, a single cartridge may be used continuously up to 500 hours. This presentation will also show how the FM-801 may be used as a stand-alone display/logger, or interfaced into GrayWolf's AdvancedSense and DirectSense multi-parameter IH loggers.

**Workshop****IH Mysteries Workshop  
SOLD OUT**

12:30 p.m.-2:00 p.m. » ICC, 212

**Facilitator:** Ellen Clas, Clas Consulting, LLC, Norfolk, MA

**Luncheon Discussions****Product Stewards Luncheon Discussion**

1:00 p.m.-2:00 p.m. » ICC, Expo, Hall B

Luncheon discussions are small conversational groups that focus on current issues, trends, relevant topics, and research. Purchase lunch from a concession and choose your discussion. Seating is limited and available first-come, first-served.

**Luncheon Discussions****Students and Early Career Professionals**

1:00 p.m.-2:00 p.m. » ICC, Expo, Hall B

Luncheon discussions are small, interactive group discussions facilitated by members of AIHA's Students and Early Career Professionals Volunteer Group. Topics address issues of specific interest to young industrial hygienists or to hygienists new to the profession. Purchase lunch and select a discussion — seating is first-come, first-served. **The first 20 students and early career professionals at the Student Tech Talks will receive a discounted voucher for lunch.**

**1. CIH Certification**

**Facilitators:** N. Greeson, Duke University, Hillsborough, NC; L. O'Donnell and B. Snow, American Board of Industrial Hygiene, Lansing, MI

**2. Creating the Support You Need to Be Successful**

**Facilitator:** C. Hanko, Chandler, AZ

**3. How to Break the Ice with Workers to Accomplish IH Tasks: Tips & Tricks for Effectively Communicating with Management**

**Facilitator:** D. Roskelley, R & R Environmental, Sandy, UT

**4. Mentoring**

**Facilitator:** A. Boester, SES Environmental, Fort Wayne, IN

**5. What Is It Like to Manage H & S at Multiple Locations: Travel, Organization, and Management Tips**

**Facilitators:** C. Elish, Eules, TX and C. Hoehn, CIH, Praxair Inc., Blaine, MN

**Jeffrey S. Lee Lecture**

1:00 p.m.-2:00 p.m. » ICC, 122

**Elimination of Occupational Cancer from Hazardous Substances**

**Presenter:** John W. Cherrie, PhD, BSC, FFOH, Research Director, Institute of Occupational Medicine (IOM), Edinburgh, UK.

Workplace exposure to chemicals or other hazardous substances in developed economies probably account for about 3% of all cancers.

Most of this disease burden has been caused by past exposure to a relatively small number of substances, e.g. asbestos, polycyclic aromatic hydrocarbons, respirable crystalline silica and diesel exhausts. For all these agents average exposure levels have been decreasing steadily over the last 30 or 40 years, typically 5–10% per annum. Therefore the occupational cancer burden in the future will most likely be much less than now. If current trends continue it is conceivable that at some point the burden will be much less than 1% of all cancers, which we could consider was the "elimination" of occupational cancer as a public health priority. This presentation will discuss the practicalities of setting a target for elimination of occupational cancer from hazardous substances and what needs to happen to achieve this goal.

**CR 306****The Criticality of Understanding Potential**

2:00 p.m.-3:00 p.m. » ICC, 103

**Presenter:** D. Groover, BST, Ojai, CA. **Monitor:** G. Samuel, Johns Hopkins University, Baltimore, MD.

For any one situation in the workplace, a wide range of safety outcomes typically occur. But often, focus is given only to what actually occurred without consideration for potential. This contributes to several problems, including safety metrics that don't tell the whole story, wasted efforts on trivial events, and a lack of confidence that something serious or catastrophic won't happen. This session will provide an understanding of potential and how to ensure its inclusion in your safety efforts.

**CR 307****The Synergy of Environmental Health and Safety and Sustainability**

2:00 p.m.-3:00 p.m. » ICC, 202

**Presenter:** L. Vallee, Harleysville Insurance, Asbury, NJ. **Monitor:** J. Kunz, 3M, St. Paul, MN.

Corporate social responsibility and sustainability initiatives present exciting, synergistic, and recognizable business objective achievement opportunities for environmental health and safety professionals. These initiatives require companies to adopt and maintain community and work force "environmentally friendly" practices that ultimately will be judged as hallmarks of business success on a profit equivalent plane. Safety professionals are well poised to "stretch" and identify and collaboratively address reduction of toxins and conservation issues validating the business value of safety efforts, intelligence, and leadership.



The viewpoints, opinions and conclusions expressed in the presentations, sessions and discussions at AIHce have not necessarily been approved or endorsed by AIHA® or ACGIH® and do not necessarily reflect those of AIHA® or ACGIH®.



RT 207

## Effective Adult SH&E Training Techniques: Back to the Basics

2:00 p.m.–4:30 p.m. » ICC, 203

**Arranger:** J. Jarrell, University of Cincinnati, Cincinnati, OH. **Moderator:** E. Maples, Deep South Center for OH&S, Birmingham, AL. **Monitors:** O. Zahn, U.S. Military, Lancaster, CA; S. Williams, Alcoa, Cranberry Township, PA.

This roundtable continues the tradition of roundtables sponsored by the Communications & Training Methods Committee on effective training techniques using case studies and professional practice updates. The topics being presented are different from those in the past, with a couple of old basics that we need to be reminded of occasionally. So, conference participants need not worry about repeated presentations. IHS are often called on to assess the need for and the success of training for the health and safety of their companies' employees. They may be called on to develop, present, or contract with SH&E trainers to present effective training. Whatever the case, a grasp of what constitutes effective training in diverse settings is essential. This roundtable will feature solutions/lessons learned for the following situations/problems: how adults learn; training needs assessments; effective training presentation skills, especially for different generations; online S&H training — making it better; and creative S&H training approaches.

- **Why Do We Care How Adults Learn?** J. Jarrell, University of Cincinnati, Cincinnati, OH.
- **The "How-To's" of Training Needs Assessments.** J. Dimos, Consultant, Oak Park, IL.
- **Effective Training Presentation Skills for Learning Transfer — How to Enhance Training Across Generations.** C. Lewis, College of the Mainland, Texas City, TX.
- **Online EHS Training — How Can We Make it Better?** J. Klane, Arizona State University, Tempe, AZ.
- **Creative Approaches to Health and Safety Training.** T. Ouimet, OEHS2, Plantsville, CT.

RT 208

## Leaders and Legends in Ergonomic Modeling

2:00 p.m.–4:30 p.m. » ICC, Wabash 2

**Arranger and Moderator:** S. Gibson, Ergonomics Applications, Salem, SC. **Monitors:** C. Bringham, 1 Source Safety and Health, Inc., Exton, PA; M. O'Reilly, N.Y. State Department of Transportation, Manilus, NY.

Ergonomic models help assess musculoskeletal risk objectively. The four speakers are legends in ergonomics, specifically in ergonomic modeling. Collectively, they were responsible for the NIOSH *Work Practices Guide for Manual Lifting* (old and new), the ACGIH® TLVs® for ergonomics, the Strain Index, and the Three-Dimensional Static

Strength Prediction Program, as well as many other advances. This roundtable will focus on how and why the models were developed and how they fit into the profession. The speakers will also address how the tools they developed lay the groundwork for the practice of ergonomics and future scientific studies. It also gives the students who worked on the Ergonomic Toolkit a chance to meet the innovators who built the tools in it.

- **Static Strength and How It Fits.** D. Chaffin, University of Michigan (Emeritus), Ann Arbor, MI.
- **The NIOSH Work Practices Guide for Manual Lifting.** T. Waters, NIOSH, Cincinnati, OH.
- **The ACGIH TLVs for Ergonomics.** T. Armstrong, University of Michigan, Ann Arbor, MI.
- **The Strain Index.** A. Garg, University of Wisconsin, Milwaukee, WI.

PO 104

## Exposure Assessment Standards and Challenges

2:00 p.m.–4:40 p.m. » ICC, 120

**Arranger:** M. Vadali, University of Minnesota, Brooklyn Park, MN. **Moderator:** T. Blodgett, 3M, St. Paul, MN. **Monitors:** J. Hwang, University of Minnesota, Minneapolis, MN; M. Weeks, Medgate, Chicago, IL.

2:00 p.m.–2:20 p.m.

**CS-104-1 Are the OSHA HAZCOM Reporting Thresholds Adequate?** T. Morris, Morris Innovative IH & S Solutions, Cincinnati, OH.

2:20 p.m.–2:40 p.m.

**CS-104-2 Identifying and Quantifying Secondary Chemical Exposures.** V. Daliessio, EMSL Analytical, Cinnaminson, NJ.

2:40 p.m.–3:00 p.m.

**SR-104-3 Comparison of Total, Inhalable, and Respirable Manganese Particle Size Fractions in Shipyard Welding Processes.** D. Chute, Atrium EH&S Services, LLC, Reston, VA; P. Blomquist, Applied Thermal Sciences, Inc., Sanford, ME.

3:00 p.m.–3:20 p.m.

**SR-104-4 Developing Exposure Parameters for Uncommon Exposures.** M. Sullivan, California State University at Northridge, Northridge, CA.

3:20 p.m.–3:40 p.m.

**SR-104-5 An Exposure Assessment Strategy and JEM for a Semiconductor Industry.** C. Torres, ENVIRON, Atlanta, GA; F. Boelter, J. Persky, ENVIRON, Chicago, IL; J. Poole, ENVIRON, Tampa, FL; P. Harper, ENVIRON, Phoenix, AZ.

3:40 p.m.–4:00 p.m.

**CS-104-6 Is FDA Approval Relevant for Occupational Health at Food Production Facilities?** T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.

4:00 p.m.–4:20 p.m.

**CS-104-7 Field Evaluation of Passive Ozone Detector Badges for Use as Screening Tools During Ozone Treatment Processes.** M. Andrew, Sumerra, Hong Kong; M. Rosales, Forensic Analytical Consulting Services, Inc., Los Angeles, CA.

4:20 p.m.–4:40 p.m.

**SR-104-8 Systematic Bias Associated with Using STEL and Ceiling Samples to Calculate TWAs.** J. Persky, F. Boelter, ENVIRON, Chicago, IL; M. Hawley, ENVIRON, Arlington, VA.

PO 105

## Nanotechnology: Assessment and Control

2:00 p.m.–4:40 p.m. » ICC, 240

**Arranger and Moderator:** K. Sheffield, Phillips 66, Bartlesville, OK. **Monitors:** R. Goldman, 3M Company, St. Paul, MN; P. Webb, NC DHHS, Raleigh, NC.

2:00 p.m.–2:20 p.m.

**CS-105-1 EPA Approaches for Assessing and Controlling Workplace Releases and Exposures to Nanomaterials.** A. Lamba, U.S. EPA, Washington, DC.

2:20 p.m.–2:40 p.m.

**SR-105-2 Physical Characterization of Multi-Walled Carbon Nanotube Aerosol Particles.** B. Chen, D. Schwegler-Berry, W. McKinney, J. Cumpston, S. Stone, S. Friend, D. Porter, V. Castranova, D. Frazer, NIOSH, Morgantown, WV.

2:40 p.m.–3:00 p.m.

**CS-105-3 Multiple Magnification Analysis for Unbound Engineered Nanoparticles Using High-Resolution Electron Microscopy (HR-EM).** K. Rickabaugh, G. Casuccio, K. Bunker, R. Ogle, RJ Lee Group, Monroeville, PA.

3:00 p.m.–3:20 p.m.

**SR-105-4 Development of a Small Battery-Operated Nanoparticle Sizer.** J. Johnson, M. Grose, J. Kolb, R. Caldwell, K. Erickson, E. Willis, TSI Incorporated, Shoreview, MN.

3:20 p.m.–3:40 p.m.

**CS-105-5 Surface Wipe Sampling for Nanomaterials.** C. Beaucham, K. Martinez, C. Geraci, NIOSH, Cincinnati, OH.

3:40 p.m.–4:00 p.m.

**SR-105-6 Evaluation of Nanoparticle Dispersion and Containment of a New Nanomaterial Fume Hood Using Computational Fluid Dynamics.** K. Dunn, J. Bennett, NIOSH, Cincinnati, OH; C. Tsai, S. Woskie, M. Ellenbecker, University of Massachusetts Lowell, Lowell, MA.

4:00 p.m.–4:20 p.m.

**SR-105-7 Occupational Exposure Assessment in Carbon Nanotube and Nanofiber Primary and Secondary Manufacturers: Mobile Direct-Reading Sampling.** M. Dahm, D. Evans, M. Schubauer-Berigan, E. Birch, J. Deddens, NIOSH, Cincinnati, OH.

4:20 p.m.–4:40 p.m.

**SR-105-8 WITHDRAWN Nanoparticle Exposure Assessment in the University Laboratory.** S. Ham, J. Park, C. Yoon, Seoul National University, Seoul, Republic of Korea; I. Lee, Inha University, Incheon, Republic of Korea.

PO 106

## Socio-Legal and Regulatory Aspects of IH Practice

2:00 p.m.–4:40 p.m. » ICC, Wabash 1

**Arrangers:** D. Dahlstrom, Exponent, Bellevue, WA; D. Mokadam, Association of Flight Attendants-CWA, Washington, DC. **Moderator:** D. Dahlstrom, Exponent, Bellevue, WA. **Monitors:** S. Sherman, U.S. Department of State, Washington, DC; D. Mokadam, Association of Flight Attendants-CWA, Washington, DC.

2:00 p.m.–2:20 p.m.

**CS-106-1 GHS and Beyond: The Power of Positive Material Declaration.** K. Kavar, Actio, Portsmouth, NH.

2:20 p.m.–2:40 p.m.

**CS-106-2 Downstream User Obligations Under REACH.** R. Skoglund, 3M Company, St. Paul, MN.

2:40 p.m.–3:00 p.m.

**CS-106-3 High Lead Levels Detected in Children's Toys, Jewelry, and Hair Accessory Items Sold at Low-Priced Retailers.** B. Sothorn, Microecologies, Inc., New York, NY.

3:00 p.m.–3:20 p.m.

**CS-106-4 The Historical Understanding of the Sources, Risks, and Regulation of Lead Exposure in New Jersey Prior to 1970.** M. Holton, ENVIRON International Corp, Princeton, NJ.

3:20 p.m.–3:40 p.m.

**CS-106-5 The NIOSH Draft Criteria Document on Occupational Exposure to Diacetyl and 2,3-Pentanedione — An Update.** L. McKernan, NIOSH, Cincinnati, OH.

3:40 p.m.–4:00 p.m.

**CS-106-6 Development and Validation of an International Safe Work Practice.** F. Boelter, J. Persky, ENVIRON, Chicago, IL; S. Bullock, ENVIRON, Leeds, United Kingdom.

4:00 p.m.–4:20 p.m.

**CS-106-7 Industrial Hygiene Behind Bars.** D. Krupinski, NIST, Boulder, CO.

4:20 p.m.–4:40 p.m.

**SR-106-8 Are Occupational Psychosocial Stressors and Coping Mechanisms Predictive of Occupational Injuries and Illnesses?** L. Brown-Ellington, Illinois State University, Normal, IL.

RT 209

## Human Biological Monitoring: State of the Art

2:00 p.m.–5:00 p.m. » ICC, 127

**Arranger:** S. Que Hee, University of California, Los Angeles, CA. **Moderator:** C. Estill, NIOSH, Cincinnati, OH. **Monitors:** L. Blum, NMS Labs, Inc., Willow Grove, PA; K. Diep, American Airlines, Fort Worth, TX.

Biological monitoring is the development, measurement, and interpretation of data obtained from human fluids, such as urine, blood, and breath. Researchers from NIOSH, universities, and corporate research entities are constantly developing new measurement techniques to measure chemical/

biochemical markers in body fluids in a non-invasive manner. The roundtable provides a snapshot of the state of the art. NIOSH researchers will present their findings on the biological monitoring after exposure to tobacco smoke, polycyclic aromatic hydrocarbons in asphalt, anthrax, pesticides, and weapons of mass destruction. Note: The findings and conclusions in the reports from NIOSH presenters are those of the author(s) and do not necessarily represent the views of NIOSH. Other presentations will focus on the biological monitoring of personal multiple biomarkers, and the state of the setting of biological environmental exposure levels (BEELs).

• **Comparing Multiple Methods for Monitoring Tobacco Smoke Exposure.** D. Sammons, NIOSH, Cincinnati, OH.

• **Biomonitoring for Exposure to Bioterrorism Agents.** R. Biagini, NIOSH, Cincinnati, OH.

• **Study of Polycyclic Aromatic Compound Metabolites in Urine of Asphalt Paving Workers: Contribution of Inhalation vs. Dermal Routes.** J. Snawder, NIOSH, Cincinnati, OH.

• **Development of Immunochemical Methods for Biomonitoring.** J. Smith, NIOSH, Cincinnati, OH.

• **Multiplexed Monitoring of Human Responsiveness.** K. Oliver, Radix BioSolutions, Ltd., Georgetown, TX.

• **The Current State of BEELs.** S. Que Hee, University of California, Los Angeles, CA.

RT 210

## Perspectives of Preparation for the CIH Exam v6.0

2:00 p.m.–5:00 p.m. » ICC, 102

**Arranger:** C. Ficklen, SQA2, Inc., Hampton, VA.

**Moderator:** A. Fleeger, ExxonMobil, Houston, TX.

**Monitors:** B. VanDevender, SQA2, Inc., Hampton, VA; B. Geyer, NASA, Kennedy Space Center, FL.

For IHs the most recognized professional credential is the Certified Industrial Hygienist (CIH) obtained through the American Board of Industrial Hygiene. Obtaining the CIH requires passing a comprehensive examination in relevant subject matter rubrics after meeting education and work experience requirements. The roundtable will cover requirements to sit for the exam and information on preparation strategies. The perspectives will cover self-assessment, gathering study materials, forming a game plan, and getting mentally focused for the exam. Lessons learned from those who were not successful initially will be given. The session will benefit students entering the profession, current professionals working to obtain the CIH, and their employers. Please note that this session is not intended to take the place of an exam review course.

• **Just the Facts — Requirements to Sit for the Exam, and the Exam Blueprint.** L. O'Donnell, ABIH, Lansing, MI.

• **Navigating the CIH Maze — You Don't Have to Do It Alone!** H. Partlowe, Henkel NA, Scottsdale, AZ.

• **Putting Your Best Foot Forward and Avoiding Common Pitfalls.** A. Windau, NASA, Cleveland, OH.

• **Live Hard, Study Hard: Studying for the Exam Without Sacrificing Your Life.** M. Canright, Forensic Analytical Consulting Services, Rancho Dominguez, CA.

• **Hitting a Homerun — Second at Bat.** M. Watson, Federal Railway Administration, Washington, DC.

• **So You Passed the CIH Exam... What's Next... A Raise? CSP Exam? New Job?** C. Ficklen, SQA2, Inc., Hampton, VA.

RT 211

## Update on Health Effects Research and Guidelines on Mold, Moisture and Damp Buildings

2:00 p.m.–5:00 p.m. » ICC, 125

**Arranger:** J. Springston, TRC Environmental, New York, NY.

**Moderator:** D. Weekes, InAIR

Environmental, Ottawa, ON, Canada. **Monitors:**

J. Springston, TRC Environmental, New York, NY;

R. Strode, Chemistry & Industrial Hygiene, Inc.,

Wheatridge, CO.

It has long been established that damp and moldy buildings are associated with adverse health effects, particularly allergies, asthma, and other respiratory ailments. Fundamental changes in the way that buildings are constructed, which were largely driven by the energy crises of the early 1970s, resulted in structures that have reduced drying potentials, water vapor transmission potentials and hygric buffer capacities, and an increase in the amount of materials that are susceptible to mold growth. The addition of poorly designed and/or maintained HVAC systems to these buildings has, for the most part, only exacerbated the problem. As a result, the number of "sick" buildings due to moisture control problems has significantly increased over the past 30+ years. Climate changes, resulting in more frequent and severe storms, along with the associated flooding, also can potentially result in large numbers of damp and moldy buildings. Publications on the remediation of mold and moisture problems in buildings include those recently released by Health Canada, the World Health Organization, the EPA and the Centers for Disease Control and Prevention. Advances in research have also provided a better understanding of what levels of dampness are problematic, the nature of the association between dampness and asthma, and effective strategies to reduce excess moisture indoors.

• **New U.S. Environmental Protection Agency Guide on Moisture Control in Public and Commercial Buildings.** P. Morey, ENVIRON, Gettysburg, PA.

- **ASHRAE Position Document on Indoor Mold and Moisture Accumulation in Buildings.** L. Nguyen, D. Weekes, InAIR Environmental Ltd., Ottawa, ON, Canada.
- **Blood from Turnips — Why Many HVAC Systems Can't Control Indoor Humidity.** W. Baker, Michaels Engineering, La Crosse, WI.
- **Population Health Effects of Mold and Damp Buildings.** J. Miller, Carlton University, Ottawa, QC, Canada.
- **Clinicians' Guidance on Mold and Moisture.** P. Schenck, University of Connecticut, Farmington, CT.

## PO 107

### Aerosols

**2:00 p.m.–5:10 p.m. » ICC, Wabash 3**  
**Arranger and Moderator:** V. Aizenberg, ExxonMobil, Houston, TX. **Monitors:** D. Malzahn, Exponent, Inc., Farmington Hills, MI; M. Sheehan, West Chester University, West Chester, PA.

**2:10 p.m.–2:30 p.m.**

**SR-107-1 Computational Fluid Dynamics (CFD) Investigation of Particle Bounce on Human Aspiration Efficiency.** K. Anderson, R. Anthony, University of Iowa, Iowa City, IA.

**2:30 p.m.–2:50 p.m.**

**SR-107-2 Particle Size Distributions of Welding Fume Measured in the Breathing-Zone and in an Emission Chamber.** J. Breskey, California State University, Fullerton, CA; A. Abelmann, ChemRisk, LLC, Chicago, IL; S. Erdal, University of Illinois, Chicago, IL.

**2:50 p.m.–3:10 p.m.**

**SR-107-3 Measurement of Carbon Nanotubes Deposition in the Human Nasal Airway.** W. Su, Y. Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM.

**3:10 p.m.–3:30 p.m.**

**SR-107-4 ~~WITHDRAWN~~ Estimation of Internal Exposure of Workers to Ionizing Radiation in the Zircon Industries.** A. Villet, Saint Gobain, Cavailon, France.

**3:30 p.m.–3:50 p.m.**

**SR-107-5 The Size Segregating Characteristics of Two Prototype Cyclones Used to Sample Diesel Particulate Matter and Coal Dust.** M. Sheehan, West Chester University, Downingtown, PA; E. Cauda, J. Volkwein, NIOSH, Pittsburgh, PA.

**3:50 p.m.–4:10 p.m.**

**SR-107-6 Evaluating the Inter-instrument Variability and Comparative Performance of the XM/2L-MIL Biological Air Sampler vs. the AGI-30 Air Sampler.** J. Black, U.S. Air Force, Wright-Patterson AFB, OH.

**4:10 p.m.–4:30 p.m.**

**SR-107-7 Use of Activity-Based Sampling (ABS), the Releasable Asbestos Field Sampler (RAFS), and the Fluidized Bed Asbestos Segregator (FBAS) for Soil Asbestos Risk Assessment.** W. Barrett, U.S. EPA, Cincinnati, OH; J. Januch, U.S. EPA, Seattle, WA; D. Berry, U.S. EPA, Denver, CO; J. Thornburg, RTI International, Research Triangle

Park, NC; J. Kominsky, EQM, Inc., Cincinnati, OH; J. Konz, U.S. EPA, Washington, DC.

**4:30 p.m.–4:50 p.m.**

**SR-107-8 Capture and Retention Efficiency of Aerosol Particles as a Function of Particle Size, Sampling Flow Rate, and Collection Media for the XM/2L-MIL Biological Air Sampler.** J. Black, U.S. Air Force, Wright-Patterson AFB, OH.

**4:50 p.m.–5:10 p.m.**

**SR-107-9 Effects of Spray Surfactant and Particle Charge on Respirable Dust Control.** M. Wang, P. Raynor, University of Minnesota, Minneapolis, MN.

## RT 212

### Implementing Engineering Controls in Construction

**2:00 p.m.–5:30 p.m. » ICC, 243**

**Arranger:** M. Cooper, The Lippy Group, Berkeley, CA. **Moderator:** R. Herrick, Harvard University, Boston, MA. **Monitors:** C. Le, CPWR — The Center for Construction Research and Training, Silver Spring, MD; C. McInnis, International Brotherhood of Boilermakers, Fall River, NS, Canada.

The construction industry exposes workers to a wide range of health and safety hazards. The National Occupational Research Agenda (NORA) includes 15 strategic goals for construction, including three related to prominent health hazards in that sector — noise, silica, and welding fumes. This roundtable will focus on those goals and research involving implementation of engineering controls to reduce exposures associated with those three hazards. Speakers will discuss the magnitude of exposure risk; the degree to which engineering controls are available, utilized, and effective; and examples of controls under development for specific high-exposure tasks. Key factors considered during selection of engineering controls, important characteristics for successful implementation, and efforts to involve multiple stakeholders in identifying and promoting use of engineering controls in construction will also be presented.

- **NORA Construction Goals: Targeting Engineering Control Needs for Noise, Silica, and Welding Fumes.** M. Gillen, NIOSH, Washington, DC.
- **Use of Industry Partnerships to Select, Evaluate, and Promote Practical and Effective Engineering Controls for Construction — Welding Fumes and Silica.** P. Susi, CPWR — The Center for Construction Research and Training, Silver Spring, MD.
- **Commercially Available Portable Local Exhaust Ventilation for Controlling Worker Exposures to Welding Fumes in Construction.** J. Meeker, University of Michigan, Ann Arbor, MI.
- **Selecting Local Exhaust Ventilation for the Control of Exposure to Silica During Tuckpointing.** M. Cooper, The Lippy Group, Berkeley, CA.
- **Engineering Controls for Noise — A “Buy Quiet” Case Study and Other NIOSH Noise Control Activities in the Construction Industry.** C. Hayden, NIOSH, Cincinnati, OH.

- **Reining in the Dust: NIOSH's Engineering Control Research to Reduce Silica Exposures in Construction.** M. Gressel, NIOSH, Cincinnati, OH.
- **Designing Controls for Dust and Noise During Heavy Chipping on Bridge Substructure Work: An Action Research Project.** S. Shepherd, University of Massachusetts, Lowell, MA.

## SS 001

### Closer to Spock's Tricorder — The Latest in Real-Time Detection

**2:00 p.m.–5:30 p.m. » ICC, 205**

**Arranger:** P. Smith, OSHA, Sandy, UT. **Moderator:** E. Bishop, Parsons, Council Bluffs, CA. **Monitors:** J. Golden, 3M Company, Cottage Grove, MN; D. Bolstad-Johnson, Phoenix Fire Department, Phoenix, AZ.

Advances in real-time detection systems and informatics now allow for high reliability data that are immediately available to decision makers. This symposium will bring together a panel of experts who as individuals are involved in designing, testing, or using the latest innovations in real-time chemical detection and identification tools and informatics platforms to get the resulting data to those who need it as quickly as possible. Assembled experts will discuss microfabricated sensor arrays, miniature mass spectrometers, traditional and atmospheric pressure ionization for mass spectrometric detection in the field, and pulling it all together with wireless transmission of data and positioning to present 3-D models of the results.

- **Smaller, Faster, Better: Mass Spectrometers Designed for High Performance in the Field.** P. Smith, OSHA, Sandy, UT.
- **Field Portable GC-MS and Enabling Sampling Technologies for Collection of Analytes from Air, Water, Particulates and Surfaces.** N. Porter, Torion Technologies, American Fork, UT.
- **Development of Mobile Ambient Ionization MS for Homeland Security and Defense.** M. Wells, Griffin Analytical, FLIR, West Lafayette, IN.
- **Prototype Micro-Gas Chromatograph for Rapid Determination of Explosive Marker Compounds.** G. Serrano, University of Michigan, Ann Arbor, MI.
- **Field Testing of a Micro-Gas Chromatograph Prototype: Near Real Time Analysis of TCE Vapors in Indoor Air in Contaminated Homes.** J. Bryant, University of Michigan, Ann Arbor, MI.
- **The Chemical Exposure Monitor with Indoor Positioning (CEMWIP) Project.** K. Brown, NIOSH, Cincinnati, OH.
- **Immediate, Wireless, Synchronized, Visual, Affordable and Elegant — Using Integrated, Real-Time Exposure Assessment Data to Make Better Decisions.** B. Groves, Emilcote Associates, Inc., Morristown, NJ.



## CR 308

### How to Build a Health and Safety Culture Through PDCA (Plan-Do-Check-Act) Approach

3:30 p.m.-4:30 p.m. » ICC, 103

**Presenter:** G. Culina, CCOHS, Hamilton, ON, Canada.  
**Monitor:** K. Chatterjee, GZA GeoEnvironmental, Inc., Fairfield, NJ.

Managing health and safety can be complex and time consuming. An occupational health and safety management system (OHSMS) provides a framework for handling key activities and ensuring continual improvement in OHS performance and the development of your safety culture. During this presentation, you will learn how you can benefit from PDCA and what standards support the implementation of an OHSMS. You will learn how to improve performance by integrating a strategic safety management culture into your organization.

## CR 309

### ISO 14001, Lean and Six Sigma Sustainability Programs

3:30 p.m.-4:30 p.m. » ICC, 202

**Presenter:** G. Popov, University of Central Missouri, Overland Park, KS. **Monitor:** P.Georgieva, University of Central Missouri, Warrensburg, MO.

ISO 14001 Environmental Management System (EMS) Standard is an effective administrative tool in the field of corporate responses to sustainability. This crossover program is designed to introduce EHS professionals to various EMS, Lean and Six Sigma tools applicable to sustainability programs. The presenter will describe how to develop ISO 14001 EMS implementation program and link it to Lean Six Sigma improvement programs to generate better environmental and operational results. Successful implementation of EMS, Lean Six Sigma model will be demonstrated.



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The findings and conclusions in the National Institute for Occupational Safety and Health abstract presentations have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.

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**Tuesday, June 19****6:30 a.m.–8:00 a.m.**AIHF Fun Run/Walk  
*White River State Park***7:30 a.m.–11:30 a.m.**Speaker Ready Room  
*ICC, 108***7:30 a.m.–4:00 p.m.**Volunteer Collaboration Café  
*ICC, Crossroads Lobby***7:30 a.m.–5:00 p.m.**Press Room  
*ICC, 112***7:30 a.m.–5:30 p.m.**Registration  
*ICC, Wabash Lobby***8:00 a.m.–9:00 a.m.****General Session:****Redefining Our Future****John M. Howard, MD, MPH, JD**  
NIOSH  
Washington, DC  
*ICC, Sagamore Ballroom***8:00 a.m.–4:00 p.m.**CareerAdvantage Development Fair 2012  
*ICC, 105***9:00 a.m.–2:00 p.m.**Annual Blood Drive  
*ICC, 110***9:00 a.m.–3:00 p.m.****Visit the Expo!***ICC, Halls A–E***Passport to Prizes, Text to Win Promo, Special Displays, Cyber Centers, Restaurants, Lounges, Expo Theater**No sessions 9:00 a.m.–10:30 a.m. and  
12:30 p.m.–2:00 p.m.**Poster Sessions***ICC, Expo, Hall B***Poster Session 403**

Authors present 10:00 a.m.–Noon

**Poster Session 404**

Authors present 1:00 p.m.–3:00 p.m.

**9:00 a.m.–4:00 p.m.**Volunteer Red Carpet Club  
*ICC, 111***Note Meeting Rooms ...****ICC = Indiana Convention Center****9:00 a.m.–5:30 p.m.**AIHce Mobile App Help Desk  
*ICC, Wabash Lobby***9:30 a.m.–11:30 a.m.**TT-02 Covanta Indianapolis, Inc. (Tour 1)  
*ICC, Bus departs Maryland Entrance;  
board by 9:15 a.m.***9:30 a.m.–12:30 p.m.**TT-02A Indianapolis Motor Speedway  
*ICC, Bus departs Maryland Entrance;  
board by 9:15 a.m.***9:30 a.m.–1:00 p.m.**TT-03 Roche Diagnostics  
*ICC, Bus departs Maryland Entrance;  
board by 9:15 a.m.***9:30 a.m.–2:30 p.m.**Exhibitor Product Demos and Presentations  
*Expo Theater, Hall C**See presentation descriptions on  
page 44 and 48.***10:00 a.m.–11:00 a.m.**CR 310 Response Safety and Industrial Hygiene  
Professionals: Are You Prepared to Respond to a  
Disaster or Incident?  
*ICC, 202*CR 311 Specifying Work Clothing to Match  
Workplace Hazards  
*ICC, 203***10:30 a.m.–11:30 a.m.**12th Annual Upton Sinclair Memorial Lecture for  
Outstanding EHS Investigative Reporting  
*ICC, 243***10:30 a.m.–Noon**Ask the Expert: With John Howard, MD, MPH, JD  
*ICC, Wabash 1***10:30 a.m.–12:30 p.m.**PO 108 Exposure Assessment Methodologies –  
Part 2  
*ICC, 240*PO 109 Health Care Industries – I  
*ICC, 103*PO 110 Ergonomics  
*ICC, Wabash 2*RT 213 Addressing Background Sources of VOCs  
During Vapor Intrusion Investigations  
*ICC, 120*RT 214 Federal Lead Update Roundtable  
*ICC, 102*RT 215 Sustainability Management: Systems,  
Process and Culture  
*ICC, 127*RT 216 Welding Industrial Survey, Fume Generation  
and Characterization Studies  
*ICC, 122***10:30 a.m.–12:50 p.m.**PO 111 Real-Time Detection Systems  
*ICC, Wabash 3***10:30 a.m.–1:00 p.m.**RT 217 GHS—The New OSHA Hazard Communication  
*ICC, 125*RT 218 Exploring New Approaches to Indoor Air  
Investigations  
*ICC, 205***11:00 a.m.–Noon**NIOSH Special Session: Updating the NIOSH  
Cancer and REL Policies  
*ICC, 104***11:30 a.m.–12:30 p.m.**CR 312 Behavior Engineering – Design Your  
Workplace to Promote Safe Behaviors  
*ICC, 203*CR 313 Manage Your Chemicals, Manage Your Risk  
*ICC, 202***12:30 p.m.–1:30 p.m.**Luncheon Discussions: NIOSH Tech Talks:  
Current Topics  
*ICC, Expo, Hall B*William P. Yant Award Lecture  
*ICC, 243***12:30 p.m.–2:00 p.m.**IH Mysteries Workshop  
*ICC, 212***12:30 p.m.–5:30 p.m.**Speaker Ready Room  
*ICC, 108***1:30 p.m.–3:00 p.m.**Town Hall: Have We Accomplished All We Can in  
Protecting Workers?  
*ICC, Wabash 2***1:30 p.m.–3:30 p.m.**TT-04 Covanta Indianapolis, Inc. (Tour 2)  
*ICC, Bus departs Maryland Entrance;  
board by 1:15 p.m.***1:30 p.m.–4:30 p.m.**TT-05 Dow AgroSciences LLC  
*ICC, Bus departs Maryland Entrance;  
board by 1:15 p.m.***1:30 p.m.–5:00 p.m.**SS 002 Exposure Scenarios for Nanomaterial  
Workers and Workplaces: Trends and Hot Issues  
*ICC, 120***1:30 p.m.–5:30 p.m.**RT 219 Downstream User Obligations Under REACH  
*ICC, 122*RT 220 Reducing Uncertainty in the Semiconductor  
Industry via Employee Exposure Assessment  
*ICC, 127*



RT 221 Welding Exposure Assessments and  
Exposure Database Design  
ICC, 240

2:30 p.m.–4:00 p.m.  
**IGNITE!** Offering Enlightenment and  
Knowledge – in a HURRY!!  
ICC, 209



2:30 p.m.–5:30 p.m.  
PO 112 Current Topics in Occupational Medicine  
and Epidemiology  
ICC, 202

RT 222 Bang! Impulse and Impact Noise: Measure-  
ment, Auditory Effects, and Hearing Protectors  
ICC, 205

RT 223 Update on New Technology Applications to  
Leverage Your ES&H Practice  
ICC, 125

3:00 p.m.–4:00 p.m.  
CR 315 Case Studies of Two Young Worker Fatalities:  
Focus on Prevention  
ICC, Wabash 3

CR 316 Incubating Accidents: How Management  
Fails at Safety  
ICC, 203

CR 317 OSHA In Health Care: Out of Sight and Out  
of Mind?  
ICC, 102

3:00 p.m.–5:20 p.m.  
PO 113 Indoor Environmental Quality – II  
ICC, 243

3:00 p.m.–5:40 p.m.  
PO 114 Industrial Hygiene General Practice  
ICC, Wabash 1

4:30 p.m.–5:30 p.m.  
CR 318 Top Eight Chemical Management Errors  
and How to Fix Them  
ICC, 102

CR 319 Turbo-Charged Risk Management –  
Integrating ISO 31000 with ISO 14001  
ICC, Wabash 3

## AIHA®

8:00 a.m.–5:00 p.m.  
AIHA Registry Programs Competency Assessments  
JW Marriott, 101

10:00 a.m.–Noon  
Aerosol Technology Committee Meeting  
JW Marriott, White River Ballroom C  
Clandestine Laboratory Working Group Meeting  
JW Marriott, 105

Engineering Committee Meeting  
JW Marriott, 103

Environmental Issues Committee Meeting  
JW Marriott, 102

Minority SIG Meeting  
JW Marriott, White River Ballroom D

Occupational and Environmental Medicine  
Committee Meeting  
JW Marriott, 106

10:30 a.m.–Noon  
Publications Committee Meeting  
ICC, Conference Room West

11:00 a.m.–1:00 p.m.  
Student Local Sections Council Business Meeting  
JW Marriott, White River Ballroom B

1:00 p.m.–3:00 p.m.  
Student and Early Career Professionals Committee  
Meeting  
JW Marriott, White River Ballroom D

1:30 p.m.–3:30 p.m.  
Biosafety and Environmental Microbiology  
Committee Meeting  
JW Marriott, White River Ballroom B

Communication and Training Methods Committee  
Meeting  
JW Marriott, 105

Engineering Industry SIG Meeting  
JW Marriott, 102

Ergonomics Committee Meeting  
JW Marriott, 104

Law Committee Meeting  
JW Marriott, 107

Local Sections Council Business Meeting  
JW Marriott, White River Ballroom G

Occupational and Environmental Epidemiology  
Committee Meeting  
JW Marriott, 103

Respiratory Protection Committee Meeting  
JW Marriott, White River Ballroom I

Sampling and Laboratory Analysis Committee  
Meeting  
JW Marriott, White River Ballroom C

2:00 p.m.–5:00 p.m.  
Continuing Education Committee Business Meeting  
ICC, 211

2:30 p.m.–3:30 p.m.  
Green Council Meeting  
JW Marriott, White River Ballroom A

3:00 p.m.–5:00 p.m.  
International Training/Qualifications in OH  
ICC, 210

4:30 p.m.–6:30 p.m.  
Volunteer Recognition Ceremony and Reception  
Marriott Downtown, Marriott Ballroom

6:30 p.m.–7:30 p.m.  
MSA/AIHA Reception  
JW Marriott, Grand Ballroom 5

## AIHF

3:30 p.m.–5:30 p.m.  
AIHF Board of Trustees Meeting  
JW Marriott, 106

## JOEH

4:00 p.m.–6:00 p.m.  
JOEH LLC Board Meeting  
JW Marriott, 311

## Ancillary

7:00 a.m.–8:45 a.m.  
Ashtead Technology Networking Breakfast  
(by invitation)  
JW Marriott, 306

8:00 a.m.–5:30 p.m.  
Dangerous Decibels Educator Training Workshop  
JW Marriott, 201

10:00 a.m.–1:00 p.m.  
Workplace Health Without Borders  
ICC, 210

11:00 a.m.–12:30 p.m.  
OSHA Compliance Officers' Forum on Equipment  
Evaluation  
JW Marriott, Grand Ballroom 7

4:00 p.m.–6:00 p.m.  
University of Cincinnati–Academy of Kettering Fellows  
JW Marriott, 308

West Virginia University Alumni Reception  
Hard Times Café, 49 South Meridian Street

4:30 p.m.–6:00 p.m.  
University of Central Missouri Alumni and Friends  
JW Marriott, 301

University of Texas and University of Houston–Clear  
Lake Reception sponsored by JK, Inc. and HIH  
Laboratory  
JW Marriott, 206

4:30 p.m.–6:30 p.m.  
University of Michigan Reception  
JW Marriott, 303

Wayne State University Alumni Reception  
JW Marriott, 208

5:00 p.m.–6:30 p.m.  
University of Washington Alumni and Friends  
Reception  
JW Marriott, 312

6:45 p.m.–8:00 p.m.  
Purdue University Alumni Reception  
JW Marriott, 314

7:30 p.m.–9:00 p.m.  
University of Oklahoma Graduates and Friends Dinner  
Milano Inn, 231 S. College Avenue

## There is a “Free Lunch” — on AIHce

All full registrants received a \$10 coupon with their  
badge mailing. Use the coupon to purchase lunch  
in the Expo on **Tuesday!** A variety of meal options  
are available. Browse the exhibits at your leisure  
and enjoy lunch — on AIHce!

# » Tuesday, June 19

GENERAL SESSION: 8:00 A.M.–9:00 A.M.  
ICC, SAGAMORE BALLROOM



## Redefining Our Future

**John M. Howard, MD, MPH, JD**, Director, NIOSH, Washington, DC

Dr. John Howard is one of the nation's leaders in occupational health and worker safety. Under his inspirational leadership, NIOSH has launched many new initiatives and made significant progress to prevent work related disease and injury. But what lies ahead for the profession?

Always an engaging speaker, Dr. Howard shares his vision of the future of OEHS. What challenges and opportunities are on the horizon? How will OEHS professionals adapt and evolve in order to address emerging trends?

*After this thought-provoking presentation the real conversation begins. Interact with Dr. Howard during a special "Ask the Expert" Session following the General Session.*

**Showtime**  
**7:45 a.m.**  
**The Cornfield Mafia**

Wake up to this toe-tapping performance – country music with a southern rock infusion!



## Exhibitor Product Demos and Presentations

9:30 a.m.–11:00 a.m. » ICC, Expo Theater, Hall C

9:30 a.m.

### CorTemp® Ingestible Core Body Temperature Sensor Technology, CorTemp-HQ, Inc.

CorTemp is a wireless monitoring solution enabling you to detect elevated core body temperature and the effectiveness of your cooling methods in hot workplace environments. Critical decisions can be made early on to protect your workforce before the onset of heat stress and fatigue. FDA cleared. The CorTemp monitor can be used to randomly, manually monitor multiple workers or can be worn to continuously monitor single workers via long range RF telemetry. There will be a live demonstration of the CorTemp sensor, data monitor, and long range accessories.

10:00 a.m.

### Potent Compound Containment, ILC Dover

ILC Dover, the worldwide leader in flexible containment systems will demonstrate various techniques for containment that can achieve levels of <1mg/u<sup>3</sup>. The

DoverPac® and other products manufactured by ILC can contain potent compounds in the nanogram levels range with low-cost flexible solutions. Containment of charging/discharging processes as well as encapsulating production equipment will be demonstrated. A brief description of our contained drum transfer devices and in process isolators will also be discussed.

10:30 a.m.

### New Disposable Size-Selective Particulate Samplers, SKC Inc.

SKC Inc. has developed size-selective samplers called Parallel Particle Impactors (PPIs) to help industrial hygienists address new sampling criteria for airborne particulate matter. SKC now introduces disposable versions of these samplers for ease in handling. For compounds such as sulfuric acid, SKC offers a PPI for thoracic particulate matter for use at 2L/min. For compounds such as crystalline silica, SKC offers a high flow PPI for collection of respirable particulate matter at 8L/min.

CR 310

### Response Safety and Industrial Hygiene Professionals: Are You Prepared to Respond to a Disaster or Incident?

10:00 a.m.–11:00 a.m. » ICC, 202

**Presenter:** M. Bernard, FEMA, Bothell, WA. **Monitor:** C. Porchas, Tuscon, AZ.

The safety and industrial hygiene professional in the industrial setting have fairly strict protocols and established procedures as they deal with day-to-day issues. However, when asked to become involved in an evolving incident or disaster, a whole different

mind-set, set of protocols, processes, and tools come into play. This presentation will discuss these issues and hopefully stimulate discussion on what those in our profession can do to prepare for being part of an incident response.

CR 311

### Specifying Work Clothing to Match Workplace Hazards

10:00 a.m.–11:00 a.m. » ICC, 203

**Presenter:** G. Kephart, Restoration Services Inc., Knoxville, TN. **Monitor:** A. Young, University of Evansville, Evansville, IN.

"Show up dressed for work." That employer statement once covered all that needed to be said

regarding work clothing. Today, many industries and occupational hazards necessitate employer-provided work uniforms. Good news: There is a large body of industry consensus standards available to specify work clothing appropriate to various potential hazards. Bad news: No one fabric is a "coverall" from the standpoint of real-world occupational hazards. This crossover program will discuss some strategies for optimizing work clothing correlation to workplace hazards.



The viewpoints, opinions and conclusions expressed in the presentations, sessions and discussions at AIHce have not necessarily been approved or endorsed by AIHA® or ACGIH® and do not necessarily reflect those of AIHA® or ACGIH®.

## 12th Annual Upton Sinclair Memorial Lecture for Outstanding EHS Investigative Reporting Preventable Deaths at "Model Workplaces": Finding Unexpected Stories on One of the Most Overlooked Beats in Journalism

10:30 a.m.-11:30 a.m. » ICC, 243



**Presenter:** Chris Hamby, The Center for Public Integrity, Washington, DC.

Between 2000 and 2011, more than 80 workers died at workplaces that were exempted from regular inspections because they were deemed among the nation's safest. In a majority of the cases,

regulators found serious safety violations, but there were usually few consequences for the company. This story is one of many that reporters could find on one of the most overlooked beats in journalism. Articles about the conditions that working men and women face can resonate deeply with a wide audience, but getting them in readers' hands and making them relatable can be challenging. Though many traditional news outlets have placed investigative reporting on the chopping block, there are many opportunities for far-reaching stories. Hamby will discuss an eight-month examination of the Occupational Safety and Health Administration's Voluntary Protection Programs, as well as investigative reporting on issues ranging from combustible dust to occupational illnesses.

### Special Session

## Ask the Expert with John Howard, MD, MPH, JD

10:30 a.m.-Noon » ICC, Wabash 1

**Moderator:** R. Herrick, Harvard University, Marblehead, MA.

Following Dr. Howard's General Session on Redefining Our Future, the real conversation begins. Join Dr. Howard at this special "Ask the Expert" Session.

### PO 108

## Exposure Assessment Methodologies — Part 2

10:30 a.m.-12:30 p.m. » ICC, 240

**Arranger:** M. Vadali, University of Minnesota, Brooklyn Park, MN. **Moderator:** S. Kim. **Monitor:** J. Hwang, University of Minnesota, Minneapolis, MN.

10:30 a.m.-10:50 a.m.

**SR-108-1 WITHDRAWN** Management of Potential Exposures to Mixtures of Toxic Chemicals in Industry. P. Sébastien, K. Fogarty, G. Duval-Arnould, C. Ripert, Saint-Gobain, Cavaillon, France.

10:50 a.m.-11:10 a.m.

**CS-108-2** Qualitative Exposure Assessment Methodology for Chemical Substances. W. Selviz, Kuwait Oil Company (KOC), Ahmadi, Kuwait.

11:10 a.m.-11:30 a.m.

**SR-108-3 WITHDRAWN** An Approach to Detect Specific Exposures to Formaldehyde. P. Sébastien, A. Villet, G. Duval-Arnould, Saint-Gobain, Cavaillon, France.

11:30 a.m.-11:50 a.m.

**CS-108-4** Beryllium Characterization of a Decommissioned Nuclear Facility. V. Holden, T. Spier, CH2M HILL Plateau Remediation Company, Richland, WA.

11:50 a.m.-12:10 p.m.

**SR-108-5** Variability Introduced into Allergen Immunoassays During the Dust Extraction Process. E. King, S. Filep, D. Block, J. Armstrong, B. Smith, M. Chapman, Indoor Biotechnologies, Charlottesville, VA.

12:10 p.m.-12:30 p.m.

**CS-108-6** Case Study: Controlling Exposure to Animal Allergens in R&D. M. Vangeel, Johnson & Johnson, Geel, Belgium.

### PO 109

## Health Care Industries — I

10:30 a.m.-12:30 p.m. » ICC, 103

**Arrangers:** M. Jones, Department of Veterans Affairs, Iowa City, IA; D. Hurley, CertainTeed Corp., North Wilkesboro, NC. **Moderator:** S. Derman, Medishare Environmental Health & Safety Services, Santa Clara, CA. **Monitors:** M. Jones, Department of Veterans Affairs, Iowa City, IA; D. Loucks, St. Luke's Regional Medical Center, Boise, ID.

10:30 a.m.-10:50 a.m.

**SR-109-1** Review of the Evidence for Airborne Transmission of Methicillin-Resistant Staphylococcus Aureus (MRSA) and Its Control. H. Perez, I. Burstyn, Drexel University, Philadelphia, PA; K. Michael, University of Washington, Seattle, WA.

10:50 a.m.-11:10 a.m.

**SR-109-2** Indoor Environmental Scientific Research to Evaluate the Use of a Novel Air Sampling Cassette to Detect Mold Spores via PCR Analysis. E. Sobek, M. McGraw, L. Pope, J. Wu, D. Graves, Assured Bio Labs, LLC, Oak Ridge, TN; S. Parkhurst, Advanced Building Forensics, Ft. Myers, FL; I. Kraut, U.S. Hygiene, Naples, FL; L. Fowler, Guardian, Knoxville, TN.

11:10 a.m.-11:30 a.m.

**CS-109-3** Health Care Compliance with ASHRAE Standard 188P: Prevention of Legionellosis Associated with Building Water Systems. D. Krageschmidt, Mayo Clinic, Rochester, MN.

11:30 a.m.-11:50 a.m.

**CS-109-4** Nosocomial Mycosis Outbreak Control and Prevention. J. Manfrida, TestAmerica, Phoenix, AZ.

11:50 a.m.-12:10 p.m.

**CS-109-5** Addressing Legionella and Waterborne Pathogens in Hospitals with a Water Risk Assessment Plan. S. Ebersohl, Pall Medical, Ann Arbor, MI.

12:10 p.m.-12:30 p.m.

**CS-109-6** Evacuate or Investigate? Preplanning Saves Disruption and Dollars. S. Rupkey, Bureau Veritas North America, Downers Grove, IL.

### PO 110

## Ergonomics

10:30 a.m.-12:30 p.m. » ICC, Wabash 2

**Arranger and Moderator:** B. Cawley, Air Products and Chemicals, Inc., Allentown, PA. **Monitors:** B. McGowan, Humantech, Inc., Ann Arbor, MI; W. Crawford, Kinder Morgan, Inc., Fernandina Beach, FL.

10:30 a.m.-10:50 a.m.

**CS-110-1** Sit/Stand Workstation Guidelines to Avoid Health Consequences Associated with Prolonged Occupational Sitting or Standing. B. McGowan, Humantech, Inc., Ann Arbor, MI.

10:50 a.m.-11:10 a.m.

**SR-110-2** Whole-Body Vibration Exposures Among Professional Bus Drivers: A Comparison of Low Floor Bus Designs. R. Blood, C. Lewis, O. Thamsuwan, P. Rynell, P. Johnson, University of Washington, Seattle, WA.

11:10 a.m.-11:30 a.m.

**SR-110-3** Ergonomic Evaluation of Manually Carried Stair Descent Devices Used for the Evacuation of High-Rise Buildings. S. Lavender, J. Mehta, S. Park, The Ohio State University, Columbus, OH; G. Hedman, P. Reichelt, K. Conrad, The University of Illinois at Chicago, Chicago, IL.

11:30 a.m.-11:50 a.m.

**CS-110-4** A Case Study with the Revised AIHA Ergonomic Toolkit. T. Blackwell, R. Sesek, C. Gungor, R. Thomas, Auburn University, Auburn, AL; S. Gibson, Ergonomics Applications, Inc., Salem, SC.

11:50 a.m.-12:10 p.m.

**SR-110-5** Shoulder Muscle Fatigue in Automotive Manufacturing. S. Ferguson, W. Marras, The Ohio State University, Columbus, OH.

12:10 p.m.-12:30 p.m.

**SR-110-6** Musculoskeletal Exposure During Automobile Assembly as a Function of Vehicle Rotation. S. Ferguson, W. Marras, The Ohio State University, Columbus, OH.

12:30 p.m.-12:50 p.m.

**CS-110-7 WITHDRAWN** Looking for Trouble ... Implications of Early Reporting Initiatives on Injury and Severity Rates. E. Kunz, Medtronic CardioVascular, Santa Rosa, CA.



RT 213

## Addressing Background Sources of VOCs During Vapor Intrusion Investigations

10:30 a.m.-12:30 p.m. » ICC, 120

**Arranger and Moderator:** C. Millner, Center for Toxicology and Environmental Health (CTEH), LLC, North Little Rock, AR. **Monitors:** D. Rush, CTEH, North Little Rock, AR; C. Metzler, BP America, Houston, TX.

One of the biggest issues complicating vapor intrusion (VI) investigation is that suspect VI compounds are commonly present in indoor air from household goods and consumer and industrial products. These background concentrations often exceed regulatory screening levels, leading to additional remedial actions. Current indoor air sampling methods do not differentiate the sources of these compounds, resulting in further costly investigations. This series of presentations will discuss these sources, use of innovative real-time detections technologies for identification and removal of sources; sampling procedures, detection limit achievement, and a hands-on demonstration by a laboratory; a case study highlighting the differences in VI investigations and the importance of background source identification and removal; and a comparison of indoor VOC concentrations to health-based indoor air screening standards and interpretation of the data. Participants will better understand how background sources confuse VI investigations, and air sampling strategies and methods for VI sampling programs.

- **Use of Real-Time Instruments for the Identification of Background Sources During Vapor Intrusion Investigations.** C. Millner, CTEH, North Little Rock, AR.
- **Challenges of Sampling and Reporting Lower Level VOCs in Air Related to Vapor Intrusion Evaluations.** T. Badal, Test America, Savannah, GA.
- **Background VOCs in Indoor Air: Sources, Concentrations, and Comparison to Health-Based Indoor Air Standards.** J. Kind, CTEH, North Little Rock, AR.
- **VI Case Study and Importance of Identifying Sources.** L. Mahoney, CTEH, North Little Rock, AR.

RT 214

## Federal Lead Update Roundtable

10:30 a.m.-12:30 p.m. » ICC, 102

**Arranger:** W. Friedman, U.S. Department of Housing and Urban Development, Washington, DC. **Moderator:** E. Pinzer, U.S. Department of Housing and Urban Development, Washington, DC. **Monitors:** D. Levitt, U.S. Department of Labor, Washington, DC; R. Riley, U.S. Department of Housing and Urban Development, Washington, DC.

While notable progress has been made in reducing childhood and adult lead poisoning, further efforts are needed by the federal government and others to

eliminate this avoidable disease. Four federal agencies will provide updates on their accomplishments and upcoming activities, noting, in particular, the opportunities that occupational and environmental health professionals have for participating in this effort.

- **EPA Lead Update.** J. Mosby, U.S. EPA, Washington, DC.
- **CDC Lead Update.** B. Brooks, U.S. Centers for Disease Control and Prevention, Atlanta, GA.
- **Army Lead Update.** G. Braybrooke, U.S. Army, Aberdeen Proving Ground, MD.
- **HUD Lead Update.** W. Friedman, U.S. Department of Housing and Urban Development, Washington, DC.

RT 215

## Sustainability Management: Systems, Process, and Culture

10:30 a.m.-12:30 p.m. » ICC, 127

**Arranger and Moderator:** L. Barnes, Bureau Veritas, Lakewood, CO. **Monitors:** R. Costello, W.L. Gore & Associates, Inc., Elkton, MD; K. Trefethen, Kaiser Permanente, Pasadena, CA.

This roundtable will share effective strategies for establishing sustainability management systems within organizations and will provide valuable lessons and perspective for health and safety professionals whose roles are continuing to evolve within their organizations. A discussion of why sustainability is essential for business from an investor's perspective will set the stage for case studies about four different corporations, each at a different stage in their sustainability program implementation. The speakers will offer their own experiences as their organizations took steps to implement sustainability and how management systems were used to help achieve success. Audience members will be encouraged to briefly share their own experiences with the group during the discussion period.

- **Business Case for Sustainability: An Investor's Perspective.** E. Seeger, Kohlberg Kravis Roberts & Co. L.P., New York, NY.
- **Case Study: Employing a Management System Approach Within a Corporate Sustainability Program.** R. Deist, Accellent, Inc., Wilmington, MA.
- **Case Study: Key Processes and Practices for Successfully Integrating Sustainability in a Global Organization.** K. Gara, Roche Diagnostics Operations, Inc., Indianapolis, IN.
- **Case Study: Company Cultural Shift Toward Sustainability.** G. Barbi, Becton Dickinson, Franklin Lakes, NJ.

RT 216

## Welding Industrial Survey, Fume Generation and Characterization Studies

10:30 a.m.-12:30 p.m. » ICC, 122

**Arranger:** A. Siert, Xcel Energy, Denver, CO. **Moderator:** J. Spear, J.E. Spear Consulting LP, Magnolia, TX. **Monitors:** F. Anderson, Zachry Industrial, Inc., San Antonio, TX; B. Stott, AMEC, Calgary, ON, Canada.

Welding is among the most important and utilized industrial processes, and welders comprise one of the largest working populations. Yet from an industrial hygiene perspective much remains to be learned due to the large number of processes and exposure variables. Fume exposures are of concern, and opportunities exist to optimally select processes to reduce exposures. Welding process cost-benefit comparisons of technical feasibility, production rate, quality, cost, and exposure levels have been conducted to determine feasibility of process selection to reduce exposures. Welders experience higher rates of lung disease and cancer, yet the importance of specific air contaminants are not yet well understood. Epidemiologic studies have yielded equivocal results due to confounders and lack of exposure information. The large number of fume components and exposure variables complicates exposure assessments. Fume generation studies provide an opportunity to characterize fume components and emission levels by process and material and evaluate the effect of determinant variables in a controlled environment.

- **Cost-Benefit Comparison of Welding Processes by Technical Feasibility, Production Rate, Quality, Cost, and Exposure Levels.** J. Spear, J.E. Spear Consulting LP, Magnolia, TX.
- **Minimizing Hexavalent Chromium Exposures in Stainless Steel Welding: Research Findings.** M. Keane, NIOSH, Morgantown, WV.
- **Generation of Fumes and Components Including Chromium, Manganese, and Iron by Welding Variables; and Welding Fume Filtration Efficiency and Pressure Drop Pattern of Respirators.** C. Yoon, Seoul National University, Seoul, Republic of Korea.
- **Innovative Welding Technologies to Reduce Hexavalent Chromium Exposures in DOD.** K. Paulson, Naval Facilities Engineering Command, Port Hueneme, CA.

PO 111

## Real-Time Detection Systems

10:30 a.m.-12:50 p.m. » ICC, Wabash 3

**Arranger:** W. Groves, Penn State, University Park, PA. **Moderator:** E. Bishop, Parsons, Pasadena, CA. **Monitors:** J. Engel, U.S. Navy, Camp Pendleton, CA; L. Monteith, University of Washington, Seattle, WA.

10:30 a.m.–10:50 a.m.

**SR-111-1 Microfabricated Gas Chromatographs with Microsensor Array Detectors for Determinations of Low-Level Complex Vapor Mixture Components.** E. Zellers, University of Michigan, Ann Arbor, MI.

10:50 a.m.–11:10 a.m.

**SR-111-2 Fast GC-PID/FID Analyses Using Resistively Heated Columns for Rapid Analyses in the Field.** J. Driscoll, PID Analyzers, LLC, Sandwich, MA; Cmdr. P. Smith, U.S. DOL, Salt Lake City, UT; S. Stearns, VICI Valco Instruments, Houston, TX.

11:10 a.m.–11:30 a.m.

**SR-111-3 Modular Quantitative Air Sampling for Thermal Desorption/Gas Chromatography Analysis in the Field.** P. Smith, OSHA, Sandy, UT.

11:30 a.m.–11:50 a.m.

**SR-111-4 Solid Phase Microextraction Screening to Determine the Presence of Formaldehyde in Products Containing Concentrations Requiring Disclosure Under the Hazard Communication Standard.** J. Kraft, University of Utah, Salt Lake City, UT; P. Smith, OSHA, Sandy, UT.

11:50 a.m.–12:10 p.m.

**SR-111-5 Effect of Calibration Environment on the Performance of Two Direct-Reading Organic Vapor Monitors.** C. Coffey, R. LeBouf, NIOSH, Morgantown, WV.

12:10 p.m.–12:30 p.m.

**SR-111-6 Design of a Real-Time Monitoring Data Transmission Module for Remote Locations.** M. McCawley, S. Salana, West Virginia University, Morgantown, WV; N. Pekney, R. Hammack, U.S. Department of Energy, Pittsburgh, PA.

12:30 p.m.–12:50 p.m.

**CS-111-7 A Wireless Hand-Held Sensor for Real-Time Monitoring of Volatile Organic Compounds.** P. Owens, Shell Martinez Refinery, Martinez, CA; C. Chen, F. Tsow, E. Forzani, N. Tao, Arizona State University, Tempe, AZ.

## RT 217

### GHS — The New OSHA Hazard Communication

10:30 a.m.–1:00 p.m. » ICC, 125

**Arranger:** D. Deeds, Industrial Health & Safety Consultants, Inc., Shelton, CT. **Moderator:** T. Knudson, Materion Brush Inc., Mayfield Heights, OH. **Monitors:** L. Sedlak, Stanley Black & Decker, Lake Forest, CA; D. Weekes, InAIR Environmental, Ltd., Ottawa, ON, Canada.

The final OSHA standard revising hazard communication to conform to the GHS has been issued and U.S. companies are involved in the transition from the old standard to the GHS. This session will explore the status of GHS implementation in the U.S., Canada, and globally. Our OSHA speaker will review the new hazcom standard with an emphasis on what has changed. OSHA has developed tools to assist small business with the transition, and a speaker will describe some of those tools. Our speaker from Canada will update us on where Canada is in the implementa-

tion process and when we can expect their regulatory changes. A final speaker will review the status of global implementation.

- **Introduction and Overview of the GHS.** D. Deeds, Industrial Health & Safety Consultants, Shelton, CT.
- **The U.S. Final Rule — Revising the GHS to Conform to the GHS.** M. Ruskin, OSHA, Washington, DC.
- **Tools to Assist Small Business in Complying with the OSHA Hazcom Standard.** D. Gioiello Jr., Industrial Health & Safety Consultants, Inc., Shelton, CT.
- **The Status of GHS Implementation in Canada.** K. Headrick, Health Canada, Ottawa, ON, Canada.
- **The Status of International Implementation of the GHS.** J. Silk, United Nations Institute of Training and Research, Pittsburgh, PA.

## RT 218

### Exploring New Approaches to Indoor Air Investigations

10:30 a.m.–1:00 p.m. » ICC, 205

**Arranger:** M. Eide, Boise, ID. **Moderator:** P. Kostle, University of Iowa, Iowa City, IA. **Monitors:** S. Iske, University of Central Missouri, Warrensburg, MO; J. Cooper, Bureau Veritas North America, Novi, MI.

Often when viewing a TV program like CSI, an industrial hygienist wishes he had such a facility to aid in difficult indoor air investigations. The modern AIHA-accredited labs have the same instrumentation and skilled chemists to advise the IH in taking samples properly and to provide the analyses to obtain the identification and quantification of the exposure chemicals. They can supply equipment and analysis needed to identify and quantitate the exposure chemicals. Several approaches will be presented and expounded that can be valuable in identifying these unknown exposures, depending on the amount of time and money to be spent on the problem.

- **Personal Whole Air Capillary Flow Sampling with Canister.** A. Rossner, Clarkson University, Potsdam, NY.
- **Evacuated Canister Validation for Volatile Organic Compounds Associated with Asthma in Health Care Settings.** R. LeBouf, NIOSH, Morgantown, WV.
- **Addressing Non-Classical Testing Requests.** S. VanEtten, EMSL Analytical, Inc., Cinnaminson, NJ.
- **Functional Group Analysis as an Aid in IAQ Investigations.** C. Manning, Assay Technology, Pleasanton, CA.
- **Indoor Air Quality Testing for Leadership in Energy and Environmental Design (LEED) Program.** E. Stuber, Galson Laboratories, East Syracuse, NY.

## NIOSH Special Session

### Updating the NIOSH Cancer and REL Policies

11:00 a.m.–Noon » ICC, 104

**Presenters:** P.A. Schulte; T.J. Lentz; P.J. Middendorf, NIOSH, Cincinnati, OH.

Since NIOSH last updated its cancer and REL policies there have been significant advances in related scientific research and risk assessment methodologies. So, in 2010, NIOSH began an effort to reassess its cancer classifications and its Recommended Exposure Limit (REL) policies to ensure that they reflect current scientific and risk management practices. Consequently, NIOSH performed a systematic historical review of its carcinogen and RELs policy issues. An important impetus for NIOSH to re-evaluate its cancer policy is to address concerns associated with the existing policy such as the use of the term “potential occupational carcinogen,” which allows for only one carcinogen category. The REL policy review addresses issues such as shift averaging, action levels, and extended workshifts. The review considers the merits of other carcinogen classifications (e.g., IARC, NTP, and GHS) and exposure limit policies (e.g., ACGIH and OSHA), to derive a draft NIOSH Carcinogen and RELs policy. This assessment has involved internal scientific discussions, providing a forum for public comment, and solicitation of stakeholder input. Key elements of the draft NIOSH Carcinogen and RELs Policy will be described as well as practical considerations for application and utility for U.S. workplaces.

Following this session, a facilitated luncheon discussion will be held in the Expo from 12:30 p.m. to 1:30 p.m. Discussion will focus on obtaining reactions to the draft policies and obtaining input from participants on potential improvements. Luncheon discussion seating is first-come, first-served.

## CR 312

### Behavior Engineering — Design Your Workplace to Promote Safe Behaviors

11:30 a.m.–12:30 p.m. » ICC, 203

**Presenter:** J. Kester, Argonne National Laboratory, Lemont, IL. **Monitor:** D. Moore, University of California, Berkeley, CA.

Everyone is talking about behavior safety these days, often promising injury cost reductions of 70% or more. Unfortunately, even the best behavior safety process will be ineffective if your workplace is not designed to promote safe behaviors. In this session, you will learn about: The role of workplace design in behavior safety; how common workplace design issues impact employee behaviors; engineering design concepts that positively impact behaviors; and methods for integrating ergonomics into the behavior safety process.

## CR 313

### Manage Your Chemicals, Manage Your Risk

11:30 a.m.–12:30 p.m. » ICC, 202

**Presenter:** K. Peterson, Safetec Compliance Systems, Inc., Vancouver, WA.

This session is designed to help EHS professionals understand how to identify and manage the inherent risk associated with the use, storage, transportation, and disposal of chemicals. Each participant will leave the session with tools that they can take back to their organizations to evaluate and prioritize goals and objectives to reduce the likelihood of worker exposures, NOVs, and enforcement actions.

## CR 314

**WITHDRAWN**

### Process Safety Management: Industry Trends and Updates

11:30 a.m.–12:30 p.m.

**Presenter:** P. Thomas, Resource Compliance, Inc., Dinuba, CA.

## Luncheon Discussions

### NIOSH Tech Talks: Current Topics

12:30 p.m.–1:30 p.m. » ICC, Expo, Hall B

Luncheon Discussions are small, highly interactive group discussions facilitated by NIOSH. Luncheon discussion seating is first-come, first-served.

#### 1. Updating NIOSH's Cancer and REL Policies

**Moderators:** P.A. Schulte, T.J. Lentz, P.J. Middelndorf, NIOSH, Cincinnati, OH.

NIOSH is in the process of updating its cancer and REL policies, and draft policies were presented in the "Updating the NIOSH Cancer and REL Policies" session. Discussion will focus on obtaining reactions to the draft policies and obtaining input from participants on potential improvements.

#### 2. Engineering Controls

**Moderator:** R.M. Hall, NIOSH, Cincinnati, OH. NIOSH engineering control efforts include planning and conducting research on engineering control technology to prevent worker exposures to hazards, and promoting the application of effective engineering control technology for safeguarding worker safety and health. NIOSH researchers help prevent occupational disease and injury by conducting workplace engineering evaluations and developing practical, solution-oriented control technology interventions. To conduct these efforts, NIOSH scientists and engineers work collaboratively with companies; unions; trade associations; labor organizations; universities; and local, state, and federal governments. Discussion on areas of engineering control research within NIOSH.

#### 3. Nanotechnology

**Moderators:** C. Geraci, L. Hodson, NIOSH, Cincinnati, OH.

NIOSH is the leading federal agency conducting research and providing guidance on the occupational safety and health implications and applications of nanotechnology. This research focuses on answering the essential questions to understanding these implications and applications. NIOSH has conducted numerous field investigations to evaluate exposures and control techniques. NIOSH is also partnering with nanomaterial companies to develop case studies on the effectiveness of using a Prevention through Design approach when designing or expanding their processes, and to demonstrate the utility of a hazard and control banding approach for risk management of engineered nanomaterials.

#### 4. Safe Patient Handling and Movement

**Moderator:** T.R. Waters, NIOSH, Cincinnati, OH. Nurses and other health care providers have one of the highest incidence rates of musculoskeletal disorders (MSDs) of any industry sector. These disorders result from exposure to heavy physical exertion associated with handling and moving patients in various health care settings. NIOSH has conducted research in the prevention of these disorders through implementation of safe patient

handling (SPH) programs. Findings from these studies demonstrate that SPH programs are highly effective in reducing risks of MSDs. Participants will discuss topics of interest.

#### 5. Buyer Beware: Know It's NIOSH Approved

**Moderator:** J. Coyne, NIOSH, Pittsburgh, PA.

All respirators used in the workplace must be certified by NIOSH. This requires stringent evaluation and testing to meet uncompromising standards of quality, performance, and reliability. The discussion will focus on how misleading advertising and the sale of counterfeit respirators were uncovered by NIOSH. Discuss the public information campaign that was launched to educate users and safety managers of these activities and provide an easy mechanism to verify NIOSH approval of filtering facepiece respirators in order to provide full protection to workers.

#### 6. Comprehensive Strategies for Hazard and Exposure Risk Assessment and Management

**Moderator:** M.D. Hoover, NIOSH, Morgantown, WV.

The NIOSH Exposure Assessment Cross-Sector Program is working to harmonize and apply the "anticipate, recognize, evaluate, control, and confirm" approach for all hazards, including infectious disease control, indoor air quality, violence in the workplace, slips-trips-and-falls, ergonomics, safe use of cleaning agents and other chemicals, shift-work, and other total-worker-health issues. This discussion will focus on finding ways to advance a more comprehensive and cost-effective systems approach to terminology, training, and practice for assessing and managing health hazards and exposure risks for all types of stressors for all classes of workers.

#### 7. Partnerships for Occupational Safety and Health: The NORA Manufacturing Agenda

**Moderators:** T. Slavin, Navistar, Inc., Warrenville, IL; F. Renshaw, Cherry Hill, NJ; T. Braun, Liberty Mutual Research, Hopkinton, MA; M. Baskett, NIOSH, Cincinnati, OH.

## Exhibitor Product Demos and Presentations Noon–2:30 p.m. » ICC, Expo Theater, Hall C

### Noon

#### Kanomax Handheld Precision Sound Level Meter with O-dB Function, Kanomax USA Inc.

The Kanomax handheld sound level meter features a lightweight, compact design. It has A, C, and F weighting modes; 28 to 130 dB measurement range; and measures LP, Leq, Le, Lmax, Lmin, and Lx. The unit is equipped with a high sensitive electrets condenser microphone that eliminates the self-noise of the microphone (O-dB function). The easy-to-read LCD is backlit and can display an analog bar graph. Additional functions can be added with optional SD program cards.

### 12:30 p.m.

#### Labconco Introduces a New Lower Energy Fume Hood, Labconco Corporation

Labconco Corporation has led product innovation in fume hoods since 1925. It continues this tradition with the introduction of a new Protector XStream fume hood. Changes in sashes, baffles, and viewing height are all present, which allow for an even higher level of containment. The features of this exciting new product will be covered in this presentation.

### 1:00 p.m.

#### Methamphetamine Lab Recognition and Safety

Senior Trooper Tom Egler has been with the Indiana State Police for 12 years. He is currently assigned to the Meth Suppression Section as an investigator providing full-time meth investigations in central Indiana.



A goal of the NORA Manufacturing Agenda is to identify the greatest opportunities to reduce injuries, illnesses, hazardous exposures, and fatalities in the manufacturing sector. This is an opportunity to share information about innovative research and successful partnerships in manufacturing, as well as to explore potential research collaborations and partnerships to improve occupational safety and health.

## William P. Yant Award Lecture Management of Workplace Health Hazards — A Multi-Pronged Approach

12:30 p.m.-1:30 p.m. » ICC, 243



**Presenter:** Tan Kia Tang, MS, Ministry of Manpower, Singapore.

Singapore embarked on its industrialization programme in the 1960s and within a span of 40 years, it had transformed from a developing country to an advanced economy nation. Con-

comitant with its rapid industrialisation, concerted efforts were made as early as in 1970s to address the associated workplace safety and health (WSH) hazards through enforcement of the Factories Act and self-regulation e.g. formation of safety committees and introducing safety and health management system. Improvements were seen in terms of the national accident and occupational disease statistics. However, following a cluster of high profile accidents in 2004, Singapore embarked on a major reform of its safety and health framework in 2005. The OSH Division was re-organised; two new units vis-a-vis the industry-led WSH Council and the WSH Institute were set up to promote WSH best practices and enhance WSH knowledge respectively; an International Advisory Panel was formed; new legislation including the goal-setting WSH Act was introduced to cover all workplaces, and enhance self-regulation with risk assessment as the cornerstone of WSH management; a 10-year WSH blueprint – WSH 2018 was launched to chart our road map; and action plans were drawn up with the aim of achieving WSH excellence by 2018. These have made a significant progress in our WSH performance.

There was no simple solution to the complex and cross-cutting WSH problems; a multi-pronged approach was needed to manage WSH at the national level. In the arena of occupational hygiene which is one of the pillars of WSH, the role of regulatory bodies in workplace health hazards management is to set and enforce occupational health and hygiene standards (e.g. exposure limits for health hazards), and provide infrastructure (e.g. for capability building and information dissemination) to facilitate compliance. While enforcement action is needed to get the job done, promotional activities and industry

engagement, incentives and recognition of efforts are effective motivators. In the final analysis, it is within the plant itself that hazards must be controlled or prevented. Specific in-plant occupational hygiene programmes (e.g. chemical management and hearing conservation programmes) and self-regulatory systems can be developed and implemented to manage health hazards. The most effective way to manage health hazards is to design them out at the planning stage; this is followed by engineering controls, administrative measures and personal protection.

This paper covers Singapore's experience in the area of occupational health hazards management over the years and the impact of various strategies, programmes and initiatives that help to shape the workplace and workforce. It highlights the multi-pronged approach to health hazards management ranging from setting standards, enforcement of law, implementing targeted intervention programmes (e.g. for noise, chemicals, confined spaces, and asbestos), building capability in hazard identification, assessment and control, monitoring and surveillance, to promotional efforts and engagement activities, research and innovations, recognition and incentive schemes. A big challenge is to reach out and engage the small and medium enterprises which constitute the bulk of the industry.

## IH Mysteries Workshop SOLD OUT

12:30 p.m.-2:00 p.m. » ICC, 212

**Facilitator:** Fred Boelter, Environ International, Chicago, IL

## Town Hall

### Have We Accomplished All We Can in Protecting Workers?

1:30 p.m.-3:00 p.m. » ICC, Wabash 2

**Moderator:** D. Johnson, ISHN Magazine, Philadelphia, PA.

**Monitor:** C. Lorenzo, OSHA, Denver, CO.

**Panelists:** C. Laszcz-Davis, The Environmental Quality Organization, Lafayette, CA; Z. Mansdorf, Sustainability Consultants, Boca Raton, FL; B. Cameron, Center to Protect Workers' Rights, Seattle, WA; F. White, ORC, Washington, DC.

Attendees will provide the questions and offer their solutions in this interactive session. A panel of experts will also offer their insight in addressing the big question, "Where do we go from here in worker protection?" Consider the following:

- Minor worker injuries and illnesses are going down. Does this mean we have accomplished our goal?
- Serious worker injuries and fatalities are going up. What is an acceptable level to claim success?
- Is OSHA still needed? If not, what should take its place?
- Are state plans leading the charge in overseeing occupational safety and health?
- If resources become scarce what should we expect from government? What should we expect from the private sector?
- The public, press, and the Hill are not clamoring for more workplace safety and health protections. Are we in maintenance mode? Or, has politics stopped the issue in its tracks?

Bring your questions, concerns, and solutions as both audience and panelists address the future of occupational safety and health.

Please turn off cell phones in all sessions.



## Find your APptitude!

Explore using various mobile apps – visit the AIHce Mobile App Help Desk in Wabash Lobby. Attend **Smart Apps for Smart People** on Thursday at the Volunteer Collaboration Café.



AIHce cannot guarantee the appearance of all presenters listed in this program. We regret any disappointment if a particular speaker is unable to present.

SS 002

## Exposure Scenarios for Nanomaterial Workers and Workplaces: Trends and Hot Issues

1:30 p.m.–5:00 p.m. » ICC, 120

**Arranger:** M. Riediker, Institute for Work and Health, Lausanne, Switzerland. **Moderators:** M. Rosenow, Argonne National Lab, Argonne, IL; M. Riediker, Institute for Work and Health, Lausanne, Switzerland; **Monitors:** R. Goldman, 3M Company, St. Paul, MN; P. Webb, Webb Associates, LLC, Worcester, MA.

Exposure scenarios are key tools to assess the risks of a material and substance and to define appropriate risk management strategies. Compared to regular chemical agents, nanomaterials bring additional uncertainties and complexity that are related to i) how exposure must be described (a nanomaterial concentration is multi-metric with characteristics such as size distribution, number, surface properties, shape, etc.), ii) the dependence of the hazard-exposure relationship on a multitude of these factors and iii) the fact that there is a considerable lack of good quality exposure data. In the absence of a good understanding of these issues, good documentation of exposure is a challenge but one that must be addressed by all that are already confronted with workers and workplaces dealing with nanomaterials. This session will focus on issues related to the development of exposure scenarios for nanomaterials. How can they be built up, what are regulatory needs in the USA, what are strategies to develop exposure scenarios under the European REACH regulation? Session participants will focus on what is currently known, and what are the challenges for developing scenarios for regulatory risk assessment, for trade promotion, and for research of exposure and health effects. This session will provide the state of knowledge and will discuss current trends in Europe and the USA.

- **Workers Exposure and Health at Nanomaterial Workplaces – An Overview.** M. Riediker, Institute for Work and Health, Lausanne, Switzerland.
- **Nanomaterials Documentation in the USA Status of the Science and Knowledge.** C. Geraci, NIOSH, Cincinnati, OH.
- **Use of Exposure (and Health) Data for Epidemiological Studies.** M. Schubauer-Berigan, NIOSH, Cincinnati, OH.
- **REACH Exposure Scenarios for Nanomaterial Workers and Workplaces.** M. Van Tongeren, Institute of Occupational Medicine, Edinburgh, United Kingdom.
- **The Challenge to Measure all the Data Needed for a Nanomaterial Exposure Scenario.** S. Tsai, University of Massachusetts, Lowell, Dracut, MA.
- **From Theory to Practice: Experiences of a Service Provider with Nanomaterial Exposure Documentation.** D. Ewert, nanoTox, Inc., Albuquerque, NM.
- **Roundtable Discussion.** M. Riediker, Institute for Work and Health, Lausanne, Switzerland.

RT 219

## Downstream User Obligations Under REACH

1:30 p.m.–5:30 p.m. » ICC, 122

**Arranger:** R. Skoglund, 3M Company, St. Paul, MN. **Moderator:** P. Harper, ENVIRON, Phoenix, AZ. **Monitors:** K. Thompson, F. May, 3M Company, St. Paul, MN.

REACH (Registration, Evaluation, Authorization and restriction of Chemical substances), the European Union's regulation on chemicals and their safe use, has significantly raised the prescriptive nature of the risk management responsibilities of downstream users of chemicals in the European Union. Under REACH, a downstream user of REACH-registered substances is responsible for ensuring that their uses and the risk management strategies they implement are within the boundaries of what the manufacturer or importer of the substance has registered. In addition, the downstream user is obligated to ensure that the relevant aspects of the risk management strategy are communicated down the supply chain as part of the REACH extended Safety Data Sheet (eSDS). Compliance with this regulation presents a unique situation to the practicing industrial hygienist wherein there is a statutory obligation to implement a risk management strategy that fits within the boundaries of the strategy delineated by the registrant. In addition to fitting a risk management strategy within the boundaries of the registration, downstream users must also reconcile registered and intended uses; foster for the co-existence of REACH exposure and release limits with traditional limits; and manage the potentially redundant, incompatible, or even contradictory risk management strategies of multiple registered substances within a process or mixture.

- **Overview of Downstream User Obligations Under REACH.** P. Harper, ENVIRON, Phoenix, AZ.
- **Downstream User Chemical Safety Assessment.** M. Van Tongeren, Institute of Occupational Medicine, Edinburgh, United Kingdom.
- **Systematic Description of Registered and Intended Uses under REACH.** L. Dell, ENVIRON, Amherst, MA.
- **Coexistence of REACH DNELs and DMELs and Traditional Exposure Limits (OELs).** R. Roy, 3M Company, St. Paul, MN.
- **Reconciling Registered and Intended Risk Management Strategies.** R. Skoglund, 3M Company, St. Paul, MN.
- **Communicating Risk Management Strategies Down the Supply Chain.** D. Deeds, Industrial Health & Safety Consultants, Huntington, CT.
- **Managing Mixtures Within a REACH Compliant Risk Management Strategy.** P. Logan, 3M Company, St. Paul, MN.
- **Workshop and Audience Participation.** P. Logan, 3M Company, St. Paul, MN.

RT 220

## Reducing Uncertainty in the Semiconductor Industry via Employee Exposure Assessment

1:30 p.m.–5:30 p.m. » ICC, 127

**Arranger:** C. Torres, ENVIRON, Atlanta, GA. **Moderator:** G. Dotson, NIOSH, Cincinnati, OH. **Monitors:** D. Westbrook, Eastman Chemicals, Kingsport, TN; C. Albaugh, Akzo Nobel, Strongsville, OH.

This roundtable will explore existing, newly developed and potential future exposure assessment data, issues, and regulations particularly related to the semiconductor manufacturing industry. Existing – speakers will review previously published studies and highlight relevant methods, results, and conclusions. Newly developed – current topics such as use of Bayesian decision analysis, mathematical modeling and cooperation with allied occupational health professionals (i.e., epidemiologists) will be explored through a case study of a recently completed exposure characterization and exposure reconstruction study conducted for three manufacturing lines previously and currently operated in Asia by the world's largest semiconductor memory manufacturer. Additionally, the benefits of partnering with academic experts in the field of exposure assessment while conducting studies of this nature will be provided by a current professor. Future – a current industry leader will discuss a prospective exposure assessment approach employed in their global operations, and a governmental representative will provide insights into likely regulatory harmonization across geographies, with potential particular relevance to the semiconductor industry.

- **Summarizing 50 Years of Semiconductor Manufacturing – An Introduction to Existing, Newly Developed and Future Exposure Assessment Data and Topics.** J. Stewart, Harvard University, Boston, MA.
- **Summarizing the IBM Exposure Assessment and Cancer Incident Studies.** R. Herrick, Harvard University, Boston, MA.
- **A Review of the United Kingdom Health and Safety Executive's Historical Hygiene Assessment (HHA) of National Semiconductor UK Facilities.** J. Cherrie, Institute of Occupational Medicine, Edinburgh, United Kingdom.
- **The Company's Role in Validating Effective Exposure Controls Currently in Place at Three Semiconductor Manufacturing Facilities in South Korea.** M. Lee, Samsung Electronics, Giheung, Republic of Korea.
- **A Current Day Worker Exposure Assessment of Three Semiconductor Manufacturing Lines in South Korea.** J. Poole, ENVIRON, Tampa, FL.
- **An Exposure Reconstruction of Previous Employee Exposures at Three Semiconductor Manufacturing Lines in South Korea.** R. Jones, ENVIRON, Chicago, IL.

- **Approaches and Benefits of Partnering with Academic Exposure Assessment Experts.**  
J. Meeker, University of Michigan, Ann Arbor, MI.
- **Study on Environmental Exposure Properties and Health Impact of Nanoparticles in Semiconductor Manufacturing Process.**  
C. Kwangmin, Samsung Health Research Institute, Giheung, Republic of Korea.
- **Intel's Chemical Use Approval Process: A Prospective Exposure Assessment Strategy.** R. Tubby, Intel Corporation, Hillsboro, OR.
- **Current Trends and an Exploration of the Future of the Regulatory Framework Impacting Exposure Assessment in the Semiconductor Industry.**  
J. Cherrie, Institute of Occupational Medicine, Edinburgh, United Kingdom.

## RT 221

## Welding Exposure Assessments and Exposure Database Design

1:30 p.m.–5:30 p.m. » ICC, 240

**Arranger:** A. Siert, Xcel Energy, Denver, CO. **Moderator:** J. Spear, J.E. Spear Consulting, LP, Magnolia, TX. **Monitors:** F. Anderson, Zachry Industrial, Inc., San Antonio, TX; B. Stott, AMEC, Calgary, ON, Canada.

Welding is among the most important and utilized industrial processes, and welders comprise one of the largest working populations. Welders experience higher rates of lung disease and cancer, yet the importance of specific air contaminants are not well understood. Epidemiologic studies have yielded equivocal results due to confounders and lack of exposure information. There is a need for exposure assessments to multiple fume components by process and material, but they must be designed to also quantify other predictor variables. There are current efforts under way to construct welding exposure databases, yet previous efforts are of very limited value due to quality and comparability problems. For exposure information to be useful and comparable, exposures and variables should be collected and recorded in a uniform fashion.

- **Flux-Cored Arc Welding Exposures in Electric Power Generation and Fume Components.**  
A. Siert, Xcel Energy, Denver, CO.
- **Thermal Cutting Exposures in Electric Power Generation and Fume Components.** S. Woods, Xcel Energy, Denver, CO.
- **Comparison of Welding Exposures Simultaneously Collected Inside the Hood vs. on the Collar, and Does Sample Placement Matter?**  
D. Dechant, University of Alabama, Tuscaloosa, AL.
- **Harmonizing Welding Fume Data Collection.** M. Harris, Hamlin & Harris, Inc., Baton Rouge, LA.
- **Development of a Multi-Metals Welding Fume Database.** J. Hicks, Exponent, Oakland, CA.
- **Development of Semiempirical Relationship Between Fume Exposure and Welding-Related Parameters Using Fraction Factorial Design.** A. Abelmann, ChemRisk, LLC, Chicago, IL.

## IGNITE

## Offering Enlightenment and Knowledge — In a Hurry!

2:30 p.m.–4:00 p.m. » ICC, 209

**Moderator:** M. Latko, AIHA, Falls Church, VA.**Arranger and Monitor:** C. Tobin, AIHA, Falls Church, VA.

The IGNITE session originated in the high-technology profession but has spread worldwide. In a five-minute presentation, speakers share their professional and personal passions using 20 slides that auto advance every 15 seconds. AIHce 2012 is offering its own version of IGNITE. Learn what's on the minds of your colleagues and friends in this innovative and engaging new format. Find out why this new program has become an international phenomenon. Experience firsthand what is meant by the IGNITE motto, "Enlighten us, but make it fast!"

- **Breathless: On Top of Colorado's Highest Peak – Mt. Elbert**  
C. Lorenzo, OSHA, Denver, CO.
- **If Video Killed the Radio Star, How Has the Internet Affected the IH Rock Star?**  
C. Ficklen, SQA2, Inc., Hampton, VA.
- **Real Time Detection Systems and the Industrial Hygienist**  
J. Driscoll, PID Analyzers, LLC, Sandwich, MA.
- **Subtle Sensory Clues: Influence or Choice**  
C. Johnson, 3M, St. Paul, MN.
- **Zombieocalypse: How the IH Saves Mankind**  
M. Cheszek, Caterpillar, Minneapolis, MN.
- **My Dad's Ring**  
J. Klane, Arizona State University, Tempe, AZ.
- **Please...Check Your Dictionary**  
S. Bucherl, pH2 LLC, Indianapolis, IN.
- **Buddhism, Science, and Unleashing the Artist Within**  
C. Redinger, Redinger 360, Inc., Harvard, MA.
- **Can Self-Help Books Help?**  
K. Nobrega, Specialty Technical Consultants, Inc., Amherst, MA.
- **How Can I Become a Super IH?**  
P. Logan, 3M, St. Paul, MN.

- **Particle Size Distributions of Welding Fume Measured in the Breathing Zone and in an Emission Chamber.** J. Breskey, University of California, Fullerton, Fullerton, CA.

## PO 112

## Current Topics in Occupational Medicine and Epidemiology

2:30 p.m.–5:30 p.m. » ICC, 202

**Arrangers:** J. Ingram, City and County of San Francisco Department of Public Health, San Francisco, CA; R. Adams, ENVIRON, Princeton, NJ. **Moderator:** C. Rennix, Navy and Marine Corps Public Health Center, Williamsburg, VA. **Monitors:** B. Dawson, AECOM, San Antonio, TX; A. Pouliot, U.S. Army, Washington, DC.

2:30 p.m.–2:50 p.m.

**SR-112-1 WITHDRAWN Long-Term Exposure to Silica and Lung Cancer Risk in Chinese Workers: A Cohort Study.** Y. Liu, W. Chen, Huazhong University of Science and Technology, Wuhan, China; K. Steenland, Emory University, Atlanta, GA.

2:50 p.m.–3:10 p.m.

**CS-112-2 Managing Heat Stress Aligned with the Thermal Work Limit.** M. Karr, Shell Oil Company, Deer Park, TX.

3:10 p.m.–3:30 p.m.

**CS-112-3 Reduction of Occupational Injuries in the German Industry Within a Two Stage Project: Results of an Epidemiologic Follow-Up Study and Application of a Tool for Prevention – The Prevention Index (PI).** J. Börger, Y. Sun, F. Bochmann, Institute for Occupational Safety and Health of German Social Accident Insurance, Sankt Augustin, Germany; K. Ponto, German Social Accident Insurance Institution for the Woodworking and Metalworking Industries, Mainz, Germany.

3:30 p.m.–3:50 p.m.

**SR-112-4 Estimation and Characterization of Polychlorinated Dibenzo-p-dioxins and Dibenzofurans Generated from an Automobile Foundry Factory in China.** L. Wang, W. Chen, Huazhong University of Science and Technology, Hubei, China.

3:50 p.m.–4:10 p.m.

**SR-112-5 Diesel Motor Emissions and the Risk of Lung Cancer – A Re-Analysis of Epidemiologic Evidences.** F. Bochmann, Y. Sun, A. Nold, M. Matenklott, IFA-DGUV, Sankt Augustin, Germany.

4:10 p.m.–4:30 p.m.

**SR-112-6 Structural Equation in Occupational Exposure and Occupational Cancer Risk Modeling.** K. Czarnocki, E. Czarnocka, B. Wit, M. Bojar, Lublin University of Technology, Lublin, Poland; J. Nowak, John Paul II Catholic University, Lublin, Poland; S. Mankiewicz, St. Johns' Regional Oncology Center, Lublin, Poland.





4:30 p.m.–4:50 p.m.

**SR-112-7 Active Issues in Risk Assessment: Carcinogen Classification.** F. Mirer, CUNY at Hunter College, New York, NY.

4:50 p.m.–5:10 p.m.

**SR-112-8 Biological Responses of Respirable Silica Dust and Their Association with Adverse Health Effects on Workers from Pottery Factories, Tungsten, and Tin Mines.** T. Zhou, Y. Rong, Y. Liu, Y. Zhou, J. Guo, W. Cheng, H. Wang, W. Chen, Huazhong University of Science and Technology, Wuhan, China.

5:10 p.m.–5:30 p.m.

**CS-112-9 Eliminating Musculoskeletal Injuries: An Early Capture Approach.** D. Ewert, OSO BioPharmaceuticals Manufacturing, Albuquerque, NM; D. Gilkey, Colorado State University, Fort Collins, CO; C. Valdez, ReForm Spine & Injury Care Center, Inc., Albuquerque, NM.

RT 222

## Bang! Impulse and Impact Noise: Measurement, Auditory Effects, and Hearing Protectors

2:30 p.m.–5:30 p.m. » ICC, 205

**Arranger:** E. Berger, 3M, Indianapolis, IN. **Moderator:** J. Cissna, Portland General Electric, Portland, OR. **Monitors:** R. Brauch, Casella CEL Inc., Williamsville, NY; T. Kakos, EES Coke Battery, LLC, Detroit, MI.

Noise of high intensity but short duration — known as impulsive and impact noise — is distinct in many respects from steady-state noise. Differences are found in the damage-risk criteria, mechanism of hearing loss, measurement and analysis, and efficacy of hearing protection. Accurate predictions of the auditory risk from these impulses lag behind our understanding of steady-state noise. The hearing conservation community must reconcile observations that impulsive and impact noise can produce greater hearing loss than steady-state noise, yet the ear appears to have unique resistance to certain types of impulsive and impact noise. This roundtable gathers leading experts in impulsive and impact noise to share the current knowledge in this area and equip industrial hygienists with tools to understand and effectively address impulsive noise and manage its impact on workers.

- **Mechanisms of NIHL from Impulse vs. Steady Noise and Effects of Kurtosis.** K. Campbell, Southern Illinois, Springfield, IL.
- **Why Is it So Hard to Predict Hazard from Impulse Noise?** G. Price, AHAAnalysis, Charlestown, MD.
- **Auditory Risk from Exposure to Impulse Noise.** G. Flamme, Western Michigan University, Kalamazoo, MI.
- **What Do Level-Dependent (“Nonlinear”) HPDs Really Offer, and How Do I Test Them with the New ANSI S12.42 Standard?** E. Berger, 3M, Indianapolis, IN.
- **Measurements of the Impulse Attenuation for Various Electronic HPDs.** W. Murphy, NIOSH, Cincinnati, OH.

- **Development of an Improved Blast Plug with Good Situational Awareness.** M. Killion, Eymotic Research, Elk Grove Village, IL.

RT 223

## Update on New Technology Applications to Leverage Your ES&H Practice

2:30 p.m.–5:30 p.m. » ICC, 125

**Arranger:** D. Larson, Lawrence Livermore National Laboratory, Livermore, CA. **Moderator:** M. Melkonian, Medgate, Ben, OR. **Monitors:** G. Hutcheson, John Deere, Waterloo, IA; M. Groh, GE Appliances and Lighting, Louisville, KY.

New technology has had an incredible impact on the systems, tools, and information the ES&H professional uses today to become better equipped, more productive, and more competitive. This roundtable will provide updates on new technology and will compare different operating systems, discuss a variety of applications available for phones that can be used by the ES&H professional, describe how to use social media during emergencies, cloud networking, explore updates on emergency response software, and describe an approach for managing industrial hygiene data. Understanding the difference between these tools helps the professional decide which technology works best for them to leverage their practice to become more effective.

- **Android? Apple-x? Linux? Windows? Unix? — The Genie Inside! Why Should You Care?** J. Svagr, New York Blood Center, New York, NY.
- **There’s an App for That — Part II.** M. Rollins, Thermo Fisher Scientific, Waltham, MA.
- **Chemical Hazards Emergency Medical Management (CHEMM) — Update.** J. Koerner, U.S. Department of Health and Human Services, Washington, DC.
- **Expanding Role of Social Networks for ES&H.** S. Derman, MediSHARE Environmental Health & Safety Services, Cupertino, CA.
- **The Cloud.** K. Diep, American Airlines, Fort Worth, TX.
- **Industrial Hygiene Data Management.** H. Chan, Marathon Petroleum Company, Findlay, OH.

CR 315

## Case Studies of Two Young Worker Fatalities: Focus on Prevention

3:00 p.m.–4:00 p.m. » ICC, Wabash 3  
**Presenters:** E. Weiss, S. Arbury, U.S. Department of Labor, Washington, DC.

In 2009, 359 workers under the age of 24 died from work-related injuries, including 27 youths under 18 years old. This presentation by a senior analyst on WHD’s Child Labor and Special Employment Team and an OSHA health scientist will review two case studies of young worker fatalities describing the cases, relevant workplace hazards, and WHD’s and

OSHA’s investigative findings. Discussion will focus on preventive measures and lessons learned to protect young workers in similar tasks and workplaces.

CR 316

## Incubating Accidents: How Management Fails at Safety

3:00 p.m.–4:00 p.m. » ICC, 203

**Presenters:** D. Bryant, University of Central Missouri, Warrensburg, MO; J. Hartle, Johnson County Fire Protection District, Warrensburg, MO. **Moderator:** M. DeVany, DeVany Industrial Consultants, Vancouver, WA.

Organizations and managers act in predictable ways to ignore, downplay, or misinterpret risk, resulting in accidents and man-made disasters. Major accidents and system failures are not caused by unknown technical factors but by managerial decisions made months or years before the event occurs. Case studies of serious accidents will illustrate the managerial failures that undermine safety and allow hazards to incubate. Recognition of these underlying managerial factors will enable professionals to develop effective strategies and prevent disastrous accidents.

CR 317

## OSHA in Health Care: Out of Sight and Out of Mind?

3:00 p.m.–4:00 p.m. » ICC, 102

**Presenter:** S. Harris, UL PureSafety, Franklin, TN. **Monitor:** L. Feng, University of California, Berkeley, CA.

Based on generally accepted myths about OSHA, the health care community may feel justified in taking little or no action to deal with occupationally acquired infectious diseases or other OSHA issues. The facts say otherwise: millions of employees across thousands of sites; the highest illness and injury rates in the nation; millions of nosocomial infections and fatalities each year; and few OSHA inspections. It looks like we finally got OSHA’s attention. Hint: “A weak culture of worker safety in this sector...”

PO 113

## Indoor Environmental Quality — II

3:00 p.m.–5:20 p.m. » ICC, 243

**Arranger:** J. Hicks, Exponent, Inc., Oakland, CA. **Moderator:** P. Rafferty, Rafferty & James, Inc., Downingtown, PA. **Monitors:** R. Froehlich, Helix Environmental Inc., Dayton, OH; R. Miller, Argus Environmental Consultants, San Antonio, TX.

3:00 p.m.–3:20 p.m.

**CS-113-1 CFD Driven Method for HVAC-Induced Cross-Draft Optimization Aimed at Promoting Chemical Hood Containment Performance.** A. Kolesnikov, CPP, Fort Collins, CO.

3:20 p.m.–3:40 p.m.

**SR-113-2 Monitoring Air Quality in Corrosive Drywall Homes.** E. Light, Building Dynamics, Ashton, MD; B. Manis, Building Health Sciences, Rockville, MD.

3:40 p.m.–4:00 p.m.

**SR-113-3 Relationship Between Strontium, Sulfur, and Reduced Sulfur Gases: Imported and Domestic Drywall.** J. Kominsky, Environmental Quality Management, Inc., Cincinnati, OH.

4:00 p.m.–4:20 p.m.

**CS-113-4 An Evaluation of TVOC Measurements Using GC-MS and GC-FID Coupled with Thermal Desorption Methodology.** R. Freeman, A. Delia, M. Spartz, Prism Analytical Technologies, Inc., Mt. Pleasant, MI.

4:20 p.m.–4:40 p.m.

**CS-113-5 Determination of Tobacco Smoke Using VOC Markers.** A. Delia, R. Freeman, R. Fike, M. Spartz, Prism Analytical Technologies, Inc., Mt. Pleasant, MI.

4:40 p.m.–5:00 p.m.

**CS-113-6 Ultrafine Particulates from Smoke Testing of Plumbing Stacks to Locate Sewer Gas Leaks in a High-Rise Building.** J. Persky, F. Bonetti, M. Baquiran, ENVIRON, Chicago, IL.

5:00 p.m.–5:20 p.m.

**CS-113-7 Formaldehyde Exposure Assessment During the Application of Professional Hair Smoothing Products.** R. Kalmes, M. Posson, Exponent, Oakland, CA; M. Fedoruk, Exponent, Irvine, CA.

## PO 114

### Industrial Hygiene General Practice

3:00 p.m.–5:40 p.m. » ICC, Wabash 1  
**Arranger and Moderator:** D. Day, Sealed Air Corporation, Duncan, SC. **Monitor:** S. Connell, University of Alabama, Birmingham, AL.

3:00 p.m.–3:20 p.m.

**SR-114-1 Determination of Nitrogen Trichloride by Dynamic Air Sampling with Solid-Phase Microextraction.** H. Liu, S. Tsai, National Taiwan University, Taipei, Taiwan.

3:20 p.m.–3:40 p.m.

**CS-114-2 Generating Meaningful Environmental Information in the Midst of an Emergency Response.** R. Vitale, D. Callaghan, R. Forman, Environmental Standards, Inc., Valley Forge, PA.

3:40 p.m.–4:00 p.m.

**CS-114-3 A Case Study in Perimeter Monitoring – Emergency Style.** H. Umhoefer, Total Safety EHS Services, Houston, TX; D. Bower, ICU – A Total Safety Company, Houston, TX.

4:00 p.m.–4:20 p.m.

**CS-114-4 Subway Chemical Detection: A Proposed System Process for a Detect-to-Warn Capability to Save Lives.** J. Ignacio, Department of Homeland Security, Washington, DC.

4:20 p.m.–4:40 p.m.

**CS-114-5 Evaluating Slips and Falls – A Tale of Two Restaurants.** S. Evans, MDE Inc., Seattle, WA.

4:40 p.m.–5:00 p.m.

**CS-114-6 Challenges Associated with Sampling for Nickel Carbonyl During Nickel Catalyst Changeouts.** J. Tudor, Shell Oil Company, Norco, LA; P. Owens, Shell Oil Company, Martinez, CA; M. Macfarlane, Shell Canada, Calgary, AB, Canada; J. Kliebert, Motiva Enterprises LLC, Convent, LA; J. Najolia, Motiva Enterprises LLC, Norco, LA.

5:00 p.m.–5:20 p.m.

**CS-114-7 Lead Exposure Due to Use of Powder Actuated Tools.** M. Wiggins, Liberty Mutual Group, Lexington, SC.

5:20 p.m.–5:40 p.m.

**CS-114-8 Industrial Hygiene Exposure Factors at Offshore Oil and Gas Platforms.** J. Singh, Golder Associates Inc., Kamuela, HI; M. Buonanno, Golder Associates, Turin, Italy; A. Wagner, Golder Associates Inc., Jacksonville, FL; N. Pampols, Studio Buonanno S.R.L., Turin, Italy.

## CR 318

### Top Eight Chemical Management Errors and How to Fix Them

4:30 p.m.–5:30 p.m. » ICC, 102

**Presenter:** J. Webb, ChemSW, Fairfield, CA. **Monitor:** L. Coutu, Concurrent Technologies Corporation, APG, MD.

Effective inventory management of any kind involves getting the right inventory to the right place at the right time in the right quantity. When chemical inventory management is out of control, inventory data is inaccurate, and chemicals won't be on hand or in the correct location, causing confusion and noncompliance. This presentation will address how to fix the eight most common chemical management errors. Examples of successful implementations and case studies will be provided.

## CR 319

### Turbo-Charged Risk Management — Integrating ISO 31000 with ISO 14001

4:30 p.m.–5:30 p.m. » ICC, Wabash 3

**Presenter:** C. Redinger, Redinger EHS, Inc., Harvard, MA. **Monitor:** K. Frank, Illinois State University, Normal, IL.

There is a paradox with risk management — it's so important and we know so much, but we struggle with fragmented programs, weak frameworks, and siloed departments. This session will show how ISO 14001 can serve as a platform to build a strong risk management system and framework with ISO 31000 on risk management. Participants will also see how 31000 can strengthen an existing 14001/18001 integrated EHSMS. Key linkage points are highlighted along with implementation tips.



The findings and conclusions in the National Institute for Occupational Safety and Health abstract presentations have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.

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## Wednesday, June 20

7:30 a.m.–11:30 a.m.

Speaker Ready Room  
ICC, 108

7:30 a.m.–3:00 p.m.

Press Room  
ICC, 112

7:30 a.m.–4:00 p.m.

Registration  
ICC, Wabash Lobby  
Volunteer Collaboration Café  
ICC, Crossroads Lobby

8:00 a.m.–9:00 a.m.

### General Session



**A CEO's Perspective:  
Redefining Our Future**

**John C. Sheptor**  
Imperial Sugar Company  
Sugar Land, TX  
ICC, Sagamore Ballroom

8:00 a.m.–4:00 p.m.

CareerAdvantage Development Fair 2012  
ICC, 105

9:00 a.m.–1:00 p.m.

### Poster Sessions

ICC, Expo, Hall B

**Poster Session (Graduate and Undergraduate Students)**

Authors present 10:00 a.m.–Noon  
**Student Posters Award Ceremony**  
12:30 p.m.–1:00 p.m.

Annual Blood Drive  
ICC, 110

9:00 a.m.–1:30 p.m.

### Visit the Expo!

ICC, Halls A–E

**Passport to Prizes, Text to Win Promo, Special Displays, Cyber Centers, Restaurants, Lounges, Expo Theater**

No sessions 9:00 a.m.–10:00 a.m. and Noon–1:00 p.m.

9:00 a.m.–4:00 p.m.

Volunteer Red Carpet Club  
ICC, 111

9:30 a.m.–1:00 p.m.

Exhibitor Product Demos and Presentations  
Expo Theater, Hall C

See presentation descriptions on page 56 and 59.

10:00 a.m.–11:00 a.m.

CR 320 Achieving World Class Health and Safety through Transformational Leadership  
ICC, 104

CR 321 Assessing Your Safety and Health Management System  
ICC, 203

CR 322 How to Develop and Sustain an Effective Accident Investigation Program  
ICC, 202

10:00 a.m.–Noon

PO 115 Environmental Microbiology Research  
ICC, 102

PO 116 Health Care Industries – II  
ICC, Wabash 1

PO 117 Integrating Exposure Assessment, Risk Assessment, and Risk Management  
ICC, Wabash 3

RT 224 Integrating Ergonomics into Green Building Design  
ICC, 120

RT 225 Methamphetamine Labs: Current Issues  
ICC, Wabash 2

RT 226 Under Pressure! Compressed Gases and Cryogenics: A Comprehensive EOHS Prospective  
ICC, 127

10:00 a.m.–Noon

ABIH Forum  
ICC, 205

10:00 a.m.–12:30 p.m.

RT 228 Trends in Green Chemistry: From Policy Reform to Innovation  
ICC, 125

10:00 a.m.–12:40 p.m.

PO 118 Safety  
ICC, 103

11:30 a.m.–12:30 p.m.

CR 323 End of an Era? The Phase Out of the ORM–D Exception  
ICC, 202

CR 324 Safety Eyewear and ANSI Standards – Seeing Is Believing!  
ICC, 203

CR 325 What Is Wrong with Mandatory Safety Training (and How to Fix It!)  
ICC, 104

Noon–1:00 p.m.

Luncheon Discussions: Volunteer Groups Tech Talks  
ICC, Expo, Hall B

12:30 p.m.–1:30 p.m.

Cummings Award Lecture  
ICC, Wabash 1

12:30 p.m.–6:30 p.m.

Speaker Ready Room  
ICC, 108

1:30 p.m.–2:30 p.m.

CR 326 Private Sector Preparedness – Is Your Company Ready for Certification?  
ICC, Wabash 3

CR 327 Proactive Management of Hospital Water Supply Systems in Support of the Environment of Care  
ICC, 103

1:30 p.m.–3:00 p.m.

Emerging Issues – Carbon Monoxide: A Persistent Problem  
ICC, 205

1:30 p.m.–3:30 p.m.

RT 234 Sustainability/CSR Reporting and the OHS Missing Link  
ICC, 125

1:30 p.m.–4:00 p.m.

RT 227 Ten Years Since the U.S. Anthrax Incidents: Engaging the IH Community  
ICC, Wabash 2

1:30 p.m.–4:10 p.m.

PO 120 Engineering Controls – Lessons from Design and Practice  
ICC, 209

1:30 p.m.–4:30 p.m.

PO 121 Environmental Issues for the EH&S Practitioners  
ICC, 104

PO 122 Noise: Evaluation, Control, and Hearing Conservation  
ICC, 202

RT 229 Application of Computational Fluid Dynamics in Industrial Hygiene  
ICC, 127

RT 230 Challenging Confined Spaces  
ICC, 120

RT 231 The Future of EHS: Past to Present  
ICC, 243

RT 232 The Next Generation of Technical Leaders: IH Student Research Showcase  
ICC, 102

1:30 p.m.–4:50 p.m.

PO 123 Respiratory Protection  
ICC, 203

1:30 p.m.–5:30 p.m.

RT 233 NIOSH Health Hazard Evaluations: Results of Recent Industrial Hygiene Evaluations  
ICC, 240

SS 003 Science Symposium: Exposure Limit Setting Processes: A Multinational Challenge  
ICC, 122

**Note Meeting Rooms ...**  
ICC = Indiana Convention Center



**2:00 p.m.–2:30 p.m.**  
 AIHA Government Affairs Update  
 ICC, 212

**3:00 p.m.–4:00 p.m.**  
 CR 328 Accident Investigation — Effective Techniques and Documentation  
 ICC, Wabash 3

CR 329 Safety Culture: Motivation and Influence  
 ICC, 103

**4:30 p.m.–5:30 p.m.**  
 CR 330 Industrial Ecology: An Industrial Hygiene Approach  
 ICC, Wabash 3

**5:00 p.m.–7:00 p.m.**  
 PO 124 Indoor Environmental Quality — III  
 ICC, Wabash 1

**5:00 p.m.–7:30 p.m.**  
 RT 235 How to Effectively Implement the New Hazcom (GHS) — A Chemical Users Perspective  
 ICC, Wabash 2

RT 236 Applying Bayesian Data Analysis in the Real World to Solve Real Problems  
 ICC, 102

**6:00 p.m.–7:00 p.m.**  
 CR 331 Safety Contacts: Caught You Doing Something Right  
 ICC, Wabash 3

## AIHA®

**8:00 a.m.–9:30 a.m.**  
 Pharmaceutical Round Robin Committee Meeting  
 JW Marriott, 102

**8:00 a.m.–5:00 p.m.**  
 AIHA Registry Programs Competency Assessments  
 JW Marriott, 101

**9:00 a.m.–Noon**  
 Construction Committee Meeting  
 JW Marriott, White River Ballroom B

**9:30 a.m.–11:00 a.m.**  
 AIHA Past Presidents' Brunch (by invitation)  
 JW Marriott, 309

**10:00 a.m.–11:00 a.m.**  
 Red Council Meeting  
 JW Marriott, 102

**10:00 a.m.–Noon**  
 ANSI/AIHA Z88 Respiratory Protection Standards Committee Meeting  
 JW Marriott, 206

Biological Monitoring Committee Meeting  
 JW Marriott, 107

Indoor Environmental Quality Committee Meeting  
 JW Marriott, White River Ballroom C

Oil and Gas Working Group  
 JW Marriott, White River Ballroom D

Practice, Standards and Guidelines Committee Meeting  
 JW Marriott, 103

Social Concerns Committee Meeting  
 JW Marriott, 104

**11:00 a.m.–Noon**  
 Violet Council Meeting  
 JW Marriott, 105

**1:30 p.m.–3:00 p.m.**  
 2012 Finance Committee Meeting  
 ICC, 211

**1:30 p.m.–3:30 p.m.**  
 Academic SIG Meeting  
 JW Marriott, White River Ballroom D

Consultants SIG Business Meeting  
 JW Marriott, 102

Green Building Working Group Meeting  
 JW Marriott, 103

Laboratory Health and Safety Committee Meeting  
 JW Marriott, White River Ballroom C

Nanotechnology Working Group Meeting  
 JW Marriott, White River Ballroom B

**3:30 p.m.–5:30 p.m.**  
 Computer Applications Committee Meeting  
 JW Marriott, 103

Control Banding Working Group Meeting  
 JW Marriott, 104

Incident Preparedness and Response Working Group Meeting  
 JW Marriott, 107

**4:00 p.m.–6:00 p.m.**  
 Fellows SIG Meeting  
 JW Marriott, Grand Ballroom 1

Permanent Conference Committee Meeting  
 ICC, Conference Room West

**4:30 p.m.–5:30 p.m.**  
 Orange Council Meeting  
 JW Marriott, 105

**5:00 p.m.–7:00 p.m.**  
 Career and Employment Services Committee Meeting  
 JW Marriott, 311

**6:30 p.m.–8:00 p.m.**  
 AIHA President's Reception (by invitation)  
 JW Marriott, Grand Ballroom 3

## Ancillary

**8:00 a.m.–5:30 p.m.**  
 Dangerous Decibels Educator Training Workshop  
 JW Marriott, 201

**1:30 p.m.–5:00 p.m.**  
 API Workshop for Petroleum Industry IHS, sponsored by American Petroleum Institute (by invitation)  
 JW Marriott, Grand Ballroom 7

**1:30 p.m.–5:30 p.m.**  
 Forest Products Industrial Hygiene Forum sponsored by NCASI  
 JW Marriott, 106

**3:00 p.m.–6:00 p.m.**  
 AAR Railroad Industrial Hygiene Forum sponsored by American Association of Railroads  
 JW Marriott, 306

**5:30 p.m.–7:30 p.m.**  
 University of South Florida Reception  
 JW Marriott, 302



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# » Wednesday, June 20

GENERAL SESSION: 8:00 A.M.–9:00 A.M.  
ICC, SAGAMORE BALLROOM

## A CEO's Perspective: Redefining Our Future



**John C. Sheptor**, President and CEO, Imperial Sugar Company, Sugar Land, TX

John C. Sheptor is recognized as a visionary leader in the global manufacturing and supply chain industries. He is known for achieving strong organizational growth, expanding markets across borders, and building resourceful teams.

In February, 2008, a dust explosion at Imperial Sugar's Port Wentworth, Georgia refinery caused the loss of lives, injuries and substantial damage to the facility. Mr. Sheptor was touring the facility at the time of the incident, narrowly escaping injury. He participated that evening and for many days thereafter in the emergency response and search for survivors.

Since then, the company has transformed itself, making numerous safety and health changes. Mr. Sheptor will share lessons learned about change, as he led Imperial Sugar through what he calls the longest and most memorable year of his life.

*Immediately following his presentation, Mr. Sheptor will host a 20 minute Q&A session. Attendees who stay will be asked to move to the front.*

### Showtime

8:00 a.m.  
AIHce 2013

**Montréal**

Join us for a preview of the excitement AIHce 2013 has in store!

## » Exhibitor Product Demos and Presentations

9:30 a.m.–10:30 a.m. » ICC, Expo Theater, Hall C

9:30 a.m.

### Introducing the mTrap: The Only Spore Trap Specifically Designed to Efficiently and Rapidly Capture PCR Air Samples, Assured Bio Labs, LLC

The new mTrap product will be introduced during the presentations. The presentation will provide an overview of the technology and a hands-on demonstration to attendees on the proper use of the mTrap with standard sampling pump and tripod technology. Free trial packs will be available.

10:00 a.m.

### Good Lab Practices with Powder Handling in an OEL 3 and 4 Environment, Flow Sciences, Inc.

Powders and potent compounds used in R&D environments can be light and fluffy (micron to nano). These harmful particulates can create serious personnel exposures. Flow Sciences designs safety containment solutions for personal protection.

CR 320

### Achieving World Class Health and Safety Through Transformational Leadership

10:00 a.m.–11:00 a.m. » ICC, 104

**Presenter:** R. Fulwiler, Technology Leadership Associates, Cincinnati, OH. **Monitor:** M. Hicks, University of Michigan, Chandler, AZ.

Leadership can be broken down into two styles – transactional and transformational. Transactional leaders focus on the work, while transformational leaders focus both on the work and the worker. Transactional leaders will achieve, at best, average results in any functional area. Transformational leaders will be more able to engage the worker and achieve above average results. This is certainly the case when it comes to achieving world-class safety, since the key to world-class safety is engagement.

CR 321

### Assessing Your Safety and Health Management System

10:00 a.m.–11:00 a.m. » ICC, 203

**Presenters:** T. Rancour, Rancour & Associates, LLC, Northville, MI; B. Russell, Systems Approach LLC, West Simsbury, CT.

Internal and external Safety & Health Management Systems (SHMS) (e.g., OSHA VPP, ANSI Z10, OHSAS 18001, etc.) are widely available and have been adopted by many companies to improve S&H program performance. This session will examine what an S&H management system is, some of the reasons driving implementation of SHMS, and some of the errors encountered in fully understanding and/or implementing these systems. The presenters will offer strategies and tools for avoiding the pitfalls and optimizing performance.

CR 322

### How to Develop and Sustain an Effective Accident Investigation Program

10:00 a.m.–11:00 a.m. » ICC, 202

**Presenter:** B. Moriarty, Chubb Insurance, Glen Ellyn, IL. **Monitor:** S. Lynch, Auburn University, Auburn, AL.

An accident investigation program is the most important safety program a company can have; however, accident investigation is one of the weakest programs in many companies today. A study of completed accident investigation reports typically reveals significant gaps in identifying the root cause and control techniques that focus on the elimination of the exposure. Accident investigation requires a process – one that leads the investigator to an exposure control technique based on the accident root cause.

## PO 115

### Environmental Microbiology Research

10:00 a.m.–Noon » ICC, 102

**Arranger:** D. Hurley, CertainTeed Corp., North Wilkesboro, NC. **Moderator:** P. Hauck, Glen Cove, NY. **Monitors:** D. Peters, Environmental Health Management, Louisville, KY; P. Dulaney, Applied Environmental, Inc., Cary, NC.

10:00 a.m.–10:20 a.m.

**SR-115-1 WITHDRAWN** Using New Parameters for Correlation Between Concentration of Carbon Dioxide and Bacterial Bioaerosols in Indoor Workplaces.

T. Lin, J. Liu, L. Yang, China Medical University, Taichung, Taiwan; P. Hung, C. Chen, Institute of Occupational Safety and Health, Taipei, Taiwan.

10:20 a.m.–10:40 a.m.

**SR-115-2** Detection and Identification of *Stachybotrys chartarum* Microbial Volatile Organic Compounds (MVOCs) On Site Using Person-Portable Gas Chromatography/Mass Spectrometry (GC-MS) Using a Thermal Desorption Accessory. A. Gifford, INFICON, Inc., East Syracuse, NY.

10:40 a.m.–11:00 a.m.

**SR-115-3** A Building Performance Model for Evaluating Bioaerosol Data. R. Spicer, H. Gangloff, WCD Group, Pennington, NJ.

11:00 a.m.–11:20 a.m.

**SR-115-4** Evaluation of Bioaerosol and Antibiotic-Resistant Characteristics on a Broiler Farm. C. Lai, T. Fan, C. Chen, Y. Chen, J. Lee, Y. Lin, Chung Shan Medical University, Taichung, Taiwan.

11:20 a.m.–11:40 a.m.

**SR-115-5** Effect of Relative Humidity on Impactor Sampling Among Four Airborne Viruses. J. Appert, P. Raynor, T. Kuehn, S. Ge, Z. Zuo, University of Minnesota, Minneapolis, MN; S. Goyal, M. Abin, Y. Chander, University of Minnesota, St. Paul, MN.

11:40 a.m.–Noon

**SR-115-6** Comparing Remel M5 and PBS Solution for Collecting Active Bacteriophage MS2 Viral Surrogate Using the XMX/2L-MIL. J. Black, U.S. Air Force, Wright-Patterson AFB, OH.

## PO 116

### Health Care Industries — II

10:00 a.m.–Noon » ICC, Wabash 1

**Arranger:** M. Jones, Department of Veterans Affairs, Iowa City, IA. **Moderator:** N. Rice, Intermountain Healthcare, Salt Lake City, UT. **Monitors:** M. Jones, Department of Veterans Affairs, Iowa City, IA; S. Derman, Medishare Environmental Health & Safety Services, Santa Clara, CA.

10:00 a.m.–10:20 a.m.

**CS-116-1** Assessment of Antineoplastic Contamination in a Chemotherapy Suite of a Hospital. R. Fernandes, O. Malik, M. Kumala, ECHO Management, Inc., Mississauga, ON, Canada.

10:20 a.m.–10:40 a.m.

**CS-116-2** Thinking Outside the Nosecone: A Case Study Discussing a Novel Solution to Control Waste Anesthetic Gas Exposure in a Vivarium. M. Canright, B. Kollmeyer, Forensic Analytical Consulting Services, Rancho Dominguez, CA; J. Martinelli, Forensic Analytical Consulting Services, Citrus Heights, CA.

10:40 a.m.–11:00 a.m.

**CS-116-3** The Importance of Good Chemical Management in Hospitals. G. Byrns, A. Nelson, Illinois State University, Normal, IL.

11:00 a.m.–11:20 a.m.

**SR-116-4 WITHDRAWN** Application of Linear Programming Model for the Management of Indoor Bioaerosol Concentrations in the Workplace. T. Lin, H. Chang, Y. Lin, China Medical University, Taichung, Taiwan.

11:20 a.m.–11:40 a.m.

**CS-116-5** Respiratory Protection Quality Improvement Project in a Health Care Facility. J. Nesbitt, D. Krageschmidt, A. Vaughn, M. Vorndran, Mayo Clinic, Rochester, MN.

11:40 a.m.–Noon

**CS-116-6** Industrial Safety Science: The Value Stream of Industrial Hygiene in Health Care. J. Bowman, S. Mazyck, St. Vincent Hospital, Indianapolis, IN.

## PO 117

### Integrating Exposure Assessment, Risk Assessment, and Risk Management

10:00 a.m.–Noon » ICC, Wabash 3

**Arrangers:** P. Williams, E Risk Sciences, LLP, Boulder, CO; B. Heckman, LaCroix Pryor Davis LLC, Mechanicsburg, PA. **Moderator:** P. Williams, E Risk Sciences, LLP, Boulder, CO. **Monitors:** J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; K. Yost, Coimm Scope, Inc., Claremont, NC.

10:00 a.m.–10:20 a.m.

**SR-117-1** Assessing Risk of Leukemia and Lymphoma by Reconstructing Exposures for a Semiconductor Industry. L. Dell, ENVIRON, Amherst, MA; F. Boelter, R. Jones, J. Persky, ENVIRON, Chicago, IL; C. Torres, ENVIRON, Atlanta, IL; J. Poole, ENVIRON, Tampa, FL; P. Harper, ENVIRON, Phoenix, AZ.

10:20 a.m.–10:40 a.m.

**SR-117-2** Historical Exposure Reconstruction Related to Railroad Locomotive Maintenance. J. Persky, F. Boelter, ENVIRON, Chicago, IL; L. Liukonen, Technical Safety & Health Consulting, Burleson, TX; B. Bullock, CSX Transportation, Jacksonville, FL; D. Shackelford, Baltimore Rail Museum, Baltimore, MD.

10:40 a.m.–11:00 a.m.

**SR-117-3** Lead Containing Thread Lubricant ("Pipe Dope") as Potential Cause of Children Poisoning. E. Rasmuson, A. Korchevskiy, T. Peveto, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

11:00 a.m.–11:20 a.m.

**SR-117-4** The Role of Life Expectancy in Inhalation Risk Assessment. A. Korchevskiy, J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

11:20 a.m.–11:40 a.m.

**SR-117-5** A Decision Support System for Linking Risk Assessment and Risk Management Information for Dermal Exposures in Emergency and Workplace Settings. S. Dotson, T. Lentz, NIOSH, Cincinnati, OH; A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH; F. Frasch, NIOSH, Morgantown, WV.

11:40 a.m.–Noon

**SR-117-6** Characterizing Dermal Route Contributions to Exposures to Chemicals Within Emergency and Workplace Settings. S. Dotson, T. Lentz, NIOSH, Cincinnati, OH; F. Frasch, NIOSH, Morgantown, WV; A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH.

## RT 224

### Integrating Ergonomics into Green Building Design

10:00 a.m.–Noon » ICC, 120

**Arranger and Moderator:** K. Irving-Deady, Computing with Comfort, Concord, MA. **Monitors:** N. Sanders, IAQ Consulting Partners, Atlanta, GA; M. Macomber, OSHA, Saginaw, MI.

The Leadership in Energy and Environmental Design (LEED) framework provides a practical way to measure energy efficiency, community impact, indoor environmental quality, plus materials and resource sustainability in design, construction, operation, and maintenance of buildings. The value of integrating human ergonomics into green buildings and computer-related equipment will be explored. Application of human factors principles could enhance workplace environments by considering placement, usability, and adjustability of fixtures and furniture for end users, as well as their control over these variables. There will be an emphasis on "human element" low risk, healthy ergonomics for users of computers and office furniture. Organizations can earn LEED credits by implementing a formal ergonomics program under the category "Innovation in Design." Another application of human factors to the LEED process is in the area of sustainable materials and resources. As important as it is to include environmental considerations, it is equally important to evaluate the conditions in which people work throughout the complete life cycle, including extraction, transportation, manufacturing, maintenance, use, recycling, and end-of-life disposal.

- **Human Factors Impact on Workers Throughout the Life Cycle.** M. O'Reilly, ARLS Consultants, Inc., Manlius, NY.
- **The Anthropometrics of Green Buildings.** M. Ling Chesk, Caterpillar, Inc., W. Roseville, MN.
- **Case Study: Ergonomics Considerations in Sustainable Office Design.** L. Nystrom, DuPont, Wilmington, DE.



- **Product Design and Passive Ergonomics: Implications for Risk Reduction and Postural Improvement.** J. Puleio, Humanscale, New York, NY.

## RT 225

### Methamphetamine Labs: Current Issues

10:00 a.m.–Noon » ICC, Wabash 2

**Arranger and Moderator:** S. Bucherl, pH2, LLC, Avon, IN. **Monitors:** M. Cameron, California Criminalistics Institute, Davis, CA; M. Miller, FBI Laboratory, Quantico, VA.

Methamphetamine labs continue to be a public health issue. Various organizations actively conduct research on hazard identification, contamination, sampling, and cleanup strategies; however, this information does not appear to be well disseminated and available to policymakers. Following collection of evidence, industrial hygiene professionals are often called on to perform hazard assessments and cleanup of these labs. This roundtable will address several current topics that will assist the practicing industrial hygienist to perform these tasks. NIOSH will discuss how first responders, health, and remediation personnel may improve their safety and effectiveness responding to a meth lab, recognition of hazards per lab type, and selection of appropriate PPE. A research summary on dermal transfer of methamphetamine and dermal exposures from household surfaces will be presented. Methamphetamine residue testing and the selection of appropriate sampling and analysis methodology will be covered. This roundtable will also provide details on various published clearance levels within the U.S. that highlight the variability of and, in some cases, the lack of cleanup criteria.

- **Clandestine Methamphetamine Laboratories: Recognition and Hazard Identification.** J. Snawder, NIOSH, Cincinnati, OH.
- **Evaluation of Dermal Transfer of Methamphetamine from Contaminated Household Surfaces.** K. Serrano, National Jewish Health, Denver, CO.
- **Methamphetamine Residue Testing Methodology Overview.** S. VanEtten, EMSL Analytical, Inc., Cinnaminson, NJ.
- **Published Clearance Levels for Methamphetamine Cleanup.** M. Cooper, Exponent, Menlo Park, CA.

## RT 226

### Under Pressure! Compressed Gases and Cryogens: A Comprehensive EOHHS Prospective

10:00 a.m.–Noon » ICC, 127

**Arranger and Moderator:** P. Zoubek, Zoubek Consulting, LLC, San Diego, CA. **Monitors:** D. Napier, DNA Industrial Hygiene, Manhattan Beach, CA; T. Case, COSHC, Royersford, PA.

Compressed gases and cryogens are among the most common types of hazardous materials encountered

in the workplace, yet their risks to worker health and safety are often overlooked and/or underestimated. In addition to the regulatory requirements in OSHA Subpart H, many consensus standards exist outside traditional worker safety standards to guide in ensuring workplace health and safety while working with and around these hazardous materials. These include NFPA 55 (Standard for Compressed Gases), NFPA 101 (Life Safety Code), and the Uniform Fire Code (UFC). This roundtable will examine the challenges and solutions to worker health and safety posed by compressed gases and cryogens. Real-world examples will be applied to both regulatory and consensus standard requirements, encompassing the safety and industrial hygiene challenges that may be encountered by the EOHHS professional.

- **NFPA 55 Overview and Common Compressed Gas Considerations.** S. Fess, Xerox Corporation, Webster, NY.
- **The Cold Hard Truth About Working with Cryogenics.** K. Krause, Praxair, Inver Grove Heights, MN.
- **Understanding Uniform Fire Code Requirements for Compressed Gases and Cryogenics.** J. Silvers, Occupational Services, Inc., San Diego, CA.
- **Proper Selection, Use, and Issues with Specialty Calibration Gas Standards.** D. Maser, Enviroair Consultant, Inc., Chesterfield, MI.

## Special Session

### ABIH Forum

10:00 a.m.–Noon » ICC, 205

The ABIH Board of Directors encourages you to attend the ABIH Forum. The ABIH board continues to stay on top of trends and concerns affecting the certified industrial hygienist and connect with those in the profession desiring to pursue the “mark of excellence”, which is the CIH. The Board of Directors will provide a short update of the happenings at ABIH and also seeks input from its stakeholders across the occupational and industrial health professions to better plan for the future of the certification process. The board will also report on how the input from participants attending the 2011 Forum has been used to refine the board’s strategic direction.

## RT 228

### Trends in Green Chemistry: From Policy Reform to Innovation

10:00 a.m.–12:30 p.m. » ICC, 125

**Arranger and Moderator:** D. Martin, Pacific Biosciences, Menlo Park, CA. **Monitors:** M. Ochs, Arizona State University, Tempe, AZ; K. Thompson, 3M, St Paul, MN.

There has been a growing global evolution toward chemical policy reform and sustainable chemical development. Regulatory reform initiatives have pushed manufacturers to increase the disclosure of toxicity and health risk information to downstream users. Green chemistry principles are becoming more widely adopted as companies strive to innovate toward

sustainable alternatives to meet growing customer demands. This roundtable will examine the growing evolution of sustainable chemical development by reviewing the movements in regulatory policy reform, consensus standards, businesses /industry partnerships, and expanding academic initiatives. This area represents great potential for industrial hygienists whose expertise is required and highly valued in expanding roles such as product stewardship and sustainability.

- **Green Chemistry Transformative Regulatory and Policy Changes.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.
- **The Changing Definition of Green.** T. Grumbles, Nexeo Solutions, LLC, Woodlands, TX.
- **Green Chemistry from a Formulator’s Perspective.** M. Buczynski, Church & Dwight Co. Inc., Princeton, NJ.
- **Attributes of Sustainable Chemistries and Processes.** R. Skoglund, 3M, St. Paul, MN.

## PO 118

### Safety

10:00 a.m.–12:40 p.m. » ICC, 103

**Arranger:** N. Orr, Becton Dickinson and Co., Franklin Lakes, NJ. **Moderator:** D. Jackson, STERIS Isomedix Services, Mentor, OH. **Monitors:** C. Dellacqua, Amgen, Thousand Oaks, CA; G. Mellor, Omega Environmental Services, Inc., Hackensack, NJ.

10:00 a.m.–10:20 a.m.

**CS-118-1 Chemical Safety in the Norwegian Oil and Gas Industry – A Large Industry Project.** J. Naerheim, Norwegian Oil Industry Association, Stavanger, Norway.

10:20 a.m.–10:40 a.m.

**CS-118-2 Sampling in the Southwestern United States: A Successful Approach to Dealing with Site-Specific Safety Issues.** S. Funk, T. Peveto, A. Duane, A. Haugh, R. Strode, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

10:40 a.m.–11:00 a.m.

**CS-118-3 Predictive Modeling of Potential Serious Injury Risk.** B. Bethel, Sikorsky Aircraft Corp, Stratford, CT; L. Beaudin, Rochester Institute of Technology, Rochester, NY; R. Striebe, Keene State College, Keene, NH.

11:00 a.m.–11:20 a.m.

**CS-118-4 Green Beans and Ice Cream: Safety – The Main Ingredient.** B. Sims, The Bill Sims Company, Columbia, SC.

11:20 a.m.–11:40 a.m.

**CS-118-5 Four Key Components to a Safety Program that Works!** T. Shuford, InjuryFree, Inc., Woodinville, WA.

11:40 a.m.–Noon

**CS-118-6 WITHDRAWN Combustible Dust: Overview and 27-Step Pocket Checklist Tool.** J. Rider, Noblesville, IN.

Noon – 12:20 p.m.

**SR-118-7 Chemical Resistance of 30 Disposable Nitrile Gloves Exposed to Simulated Movement.** R. Phalen, California State University,

San Bernardino, CA; W. Wong, University of California, Los Angeles, CA.

12:20 p.m.–12:40 p.m.

**SR-118-8 Confined Space Emergency Response: Assessing Employer and Fire Department Practices.** M. Wilson, University of California, Berkeley, CA.

## CR 323

### End of an Era? The Phase Out of the ORM-D Exception

11:30 a.m.–12:30 p.m. » ICC, 202

**Presenter:** I. Powell, 3E Company, San Diego, CA.

**Monitor:** C. Ifeanyi-Ileka, Freeport McMoran Copper & Gold, Safford, AZ.

In this session, the speaker will discuss the changes of the elimination of ORM-D and provide insight on how to skillfully navigate through the critical business and regulatory implications. The following issues will be discussed: reclassification of ORM-D items for transportation as limited quantity; updating employee training and guidance documents to recognize and conform to new requirements; evaluation of transportation systems to support new requirements and adjustments to packaging, marking, labeling, and shipping documentation procedures.

## CR 324

### Safety Eyewear and ANSI Standards — Seeing is Believing!

11:30 a.m.–12:30 p.m. » ICC, 203

**Presenter:** K. Daems, Wolf Peak International, Layton, UT.

This course will put new meaning to the term “seeing is believing.” Often, it is not understood what makes eyewear qualify as safety eyewear. Sometimes it is not even understood there are standards governing safety eyewear. This course will help attendees “see” more clearly with increased knowledge, about the following areas: reasons to use safety eyewear; features available and technologies used to produce safety eyewear, mandated safety standards, testing requirements, and standards enforcement.

## CR 325

### What Is Wrong with Mandatory Safety Training (and How to Fix It)!

11:30 a.m.–12:30 p.m. » ICC, 104

**Presenter:** J. Klane, Arizona State University, Tempe, AZ.

**Monitor:** M. Hicks, University of Michigan, Chandler, AZ.

Mandatory training has many problems, including not learner-friendly, counter to adult learning principles, no training needs assessment, ineffective delivery, overemphasizing information, expecting automatic learning outcomes, over-reliance on written tests, viewing training as stand-alone entities. Possible improvements/solutions/“fixes” include: putting learners’ needs first, conducting training needs assessments, following ANSI/ASSE’s Z490 Standard on EHS Training and using many adult learning principles. Case studies are used augmenting points, training problems, and/or training “fixes.”

## Luncheon Discussions

### Volunteer Group Tech Talks

Noon–1:00 p.m. » ICC, Expo, Hall B

Luncheon Discussions are small, highly interactive group discussions facilitated by representatives from various AIHA® Volunteer Groups. Topics reflect current trends and high-interest, relevant issues from each Volunteer Group’s technical content. **Purchase lunch and select a Tech Talk — seating is first-come, first-served. Topics subject to change.**

#### 1. Aerosol Technology Committee

**Topic:** Nanoparticle Leakage through Face Seal Interface of Filtering Facepiece Respirators

Engineered nanoparticles are produced in several industrial processes. Some of the nanomaterials are potentially toxic. Workers use NIOSH-approved respirators for protection against nanomaterials. Nanoparticle penetration through respirator filter media is well known. Face seal leakage, however, has been not been studied in detail. This talk will provide information on recent findings on nanoparticle leakage.

#### 2. Biological Monitoring Committee

**Topic:** When to Use Biomonitoring in the Workplace  
Experts will answer questions on the topic and problems associated with biological monitoring.

#### 3. Biosafety and Environmental Microbiology Committee

**Topic:** Biosafety in Research Laboratories

The NIH issued changes in requirements for laboratories with respect to design criteria. This talk will examine issues confronting industrial hygienists who have responsibility in academic, pharmaceutical, and health care clinical research laboratories.

#### 4. Communication and Training Methods Committee

**Topic:** Successful Use of Apps in Training and Communication

Share ideas on the effective use of software applications in mobile learning and hazard communication.

#### 5. Computer Applications Committee

**Topic:** Website Design, Mobile Devices, and Threats (Virus, Spam, Phish, etc.) Is there an App for that?

Discuss topics of interest or questions related to computers and apps.

#### 6. Confined Spaces Committee

**Topic:** Confined Space Entry Potpourri

Talk with committee members regarding confined space entry interests and challenges. Committee members will share innovative written procedures, information on various confined space entry guides, how to size a confined space program to fit your business, and differing requirements of various agencies. Prospective new members are invited to stop by.

#### 7. Construction Committee

**Topic:** A New Approach to Managing Heat Stress in Workplace

Discuss the prevention of heat stress illnesses, injuries, and fatalities.

#### 8. Control Banding Working Group (co-sponsored by Nanotechnology Working Group)

**Topic:** Advances in Contamination Control and Cleanup

Share information about state-of-the-art and emerging strategies, methods, equipment, and infrastructure for good practice to anticipate, recognize, evaluate, control, and confirm effective contamination control and cleanup for engineered nanomaterial and other potentially toxic material usage in laboratories and other workplaces.

## Noon

### AtlasWork™, Atlas Ergonomics

AtlasWork is a web-based application codedigned with Cargill to manage data supporting the organization’s manufacturing operations. It records the requirements of the work; addresses ergonomic risk; analyzes return to work and limited duty job match; proactively identifies potential injuries; and measures and monitors program performance. It solves the need to fully integrate data used by safety, HR, workers’ compensation, and case management professionals. By doing so, an organization can monitor program performance; identify and focus on areas of risk to prevent injuries; ensure all stakeholders are using up-to-date information to make decisions; and provide external access to subject matter experts to assist with solution development and the safe return of injured employees.

## Exhibitor Product Demos and Presentations

Noon–1:00 p.m. » ICC, Expo Theater, Hall C

## 12:30 p.m.

### An Online Tool for GHS MSDS Authoring, ChemWatch NA

In 2003, the United Nations adopted the Globally Harmonized System of Classification and Labelling of Chemicals, and encouraged countries to define their implementation periods. The U.S. and other countries will soon be requiring new MSDSs and labels in multiple languages with specialized graphics to comply with these regulations. ChemWatch offers an online authoring system with tools to simplify the creation of these documents. Come learn about GHS requirements and how to meet them at AIHce.

## 9. Engineering Committee

**Topic:** Computational Fluid Dynamics (CFD) and Industrial Hygiene (IH)

For over two decades many industries have used CFD. Now with increased processing power of personal computers it is available to more industries. CFD can aid in the design of engineering controls and estimate worker exposure to contaminants, along with many other useful applications to IH. People with all levels of CFD knowledge are invited.

## 10. Ergonomics Committee

**Topic:** Ergonomics of Portable Hand-Held Devices  
Portable hand-held devices can be a benefit to humankind but can also be the bane of our existence. Discuss both physical and cognitive ergonomics of handheld devices.

## 11. Green Building Working Group

**Topic:** AIHA's Indoor Air Quality Management Program (IAQMP) Registry

Discuss the new IAQMP registry, including how it will fit into green building certifications (IgCC, LEED, etc.) and the targeted audience.

## 12. Indoor Environmental Quality Committee

**Topic:** Drywall: Moldy or Chinese

Experts will discuss AIHA's IEQ source documents and how they may impact everyday litigation. Participants are encouraged to bring general questions, as well as to share critical reviews of these documents for those practicing IEQ regularly.

## 13. International Affairs Committee

**Topic:** Volunteer Opportunities in the IAC

Focus on current activities and projects of the IAC, including ambassadorships to foreign countries, outreach to developing countries, training Chinese occupational health and safety inspectors, and current documents being developed.

## 14. Ionizing Radiation Committee

**Topic:** Understanding and Responding to Radiation Fears

Industrial hygienists often find handling people's fears to be more challenging than resolving technical issues. This talk will look at the basis for radiation fears, along with how to listen and respond to questions about radiation safety.

## 15. Laboratory Health and Safety Committee

**Topic:** Laboratory Sustainability Continuous Improvement Rating System

Discuss current recommended changes to Labs 21 Sustainability Environmental Performance Criteria developed by the International Institute for Sustainable Laboratories (I2SL).

## 16. Nanotechnology Working Group (co-sponsored by Control Banding Working Group)

**Topic:** Advances in Contamination Control and Cleanup

Share information about state-of-the-art and emerging strategies, methods, equipment, and infrastructure for good practice to anticipate, recognize, evaluate, control, and confirm effective contamination control and cleanup for engineered

nanomaterial and other potentially toxic material usage in laboratories and other workplaces.

## 17. Noise Committee

**Topic:** Current Noise Topics and General Discussion

## 18. Nonionizing Radiation Committee

**Topic:** Smart Meters and Other Contributors to the Sea of Nonionizing Radiation that Surrounds Us  
Many utility providers have started using smart meters that use radio frequency (RF) radiation to wirelessly send information about utility usage. Some communities are concerned about exposure. Discuss the emissions from these meters and how they fit into the RF environment around us.

## 19. Occupational and Environmental Medicine Committee

**Topic:** Current Topics in Occupational and Environmental Medicine

## 20. Protective Clothing and Equipment Committee

**Topic:** Effective Implementation of PPE Hazard Assessment  
Discuss compliance requirements, while sharing examples of PPE Hazard Assessments and methods for communicating PPE requirements to field staff.

## 21. Respiratory Protection Committee

**Topic:** Fit Testing Respirators — Ask the Experts  
A unique opportunity to pick the brains of two experts on respirator fit testing, Dr. Roy McKay of the Univ of Cincinnati, and Jay Parker, Physical Scientist at NIOSH — NPPTL. Also, discuss new developments in fit testing methods and standards.

## 22. Safety Committee

**Topic:** A Comprehensive Review of the European Standard for Pallet Rack Safety  
Currently there is no OSHA standard for the design, installation, and maintenance of steel static storage systems (pallet rack storage). Existing ANSI standards do not include guidance on the operational aspects of these systems. Compare the European Standard EN 15635 *Steel Static Storage Systems — Application and Maintenance of Storage Equipment and AIHA's Storage Rack Safety Guidelines*.

## 23. Sampling and Laboratory Analysis Committee

**Topic:** Common Industrial Hygiene Sampling Issues  
Discuss common issues encountered during worker exposure assessments. Both active and passive sampling will be addressed.

## 24. Stewardship and Sustainability Committee

**Topic:** AIHA Green Chemistry Position Paper  
After the release of this position paper, the committee was asked to provide comments for the California Department of Toxic Substances Control final green chemistry regulation. Discuss the value of commenting as part of the regulatory engagement process, which the committee advocated for in this position paper.

## Donald E. Cummings Award Lecture

### All Dressed Up — But Where Are We Going?

12:30 p.m.–1:30 p.m. » ICC, Wabash 1



**Presenter:** Franklin E. Mirer, PhD, CIH, CUNY School of Public Health, New York, NY

As occupational health and safety practitioners, we face some serious problems: the loss of the manufacturing base; the decline in quality jobs and enforcement

of rights at work; contracting in, out and offshore; congressional interventions; and obstruction of new health and safety protections, both governmental and consensus. The formation of OSHA in 1970, centralizing a national discourse, combined with better social fundamentals, spurred major improvements in process and knowledge — it's up to our profession whether progress is now stalled or is going to be reversed.

The last 40 years are best understood in terms of actual paradigms, which include: Auto Industry H&S Programs; Lead; Energy lockout; Formaldehyde; Metalworking fluids; Ergonomics; Risk Assessment for designing protections. The UAW v. General Dynamics case established that compliance with a PEL (or other OSHA standard) doesn't give employers a license to kill.

If health and safety — specifically industrial hygiene — is to advance, we need to secure our base (in manufacturing and chemicals) and extend our reach. This means a new focus on health care, high risk service sector occupations and small workplaces. The essence of IH is: measure exposure to a hazard; determine a limit or a level of concern; reduce exposure below that limit; work for continuous improvement. What's obvious for chemicals and noise must be applied to ergonomic risk factors, infectious agents, biological agents, and work related psychosocial stress.

Most important, the profession should internalize the ethic that our task — whether employed by management, consultants, government or labor — is to give voice to those workers who now can't speak.

## CR 326

### Private Sector Preparedness — Is Your Company Ready for Certification?

1:30 p.m.–2:30 p.m. » ICC, Wabash 3

**Presenter:** E. Clas, Clas Consulting LLC, Norfolk, MA.  
**Monitor:** A. Brown, Illinois State University, Normal, IL.

The Voluntary Private Sector Preparedness Accreditation and Certification Program (PS-Prep) is mandated by Title IX of the *Implementing Recommendations*



of the 9/11 Commission Act of 2007 (the Act). Its purpose is to enhance nationwide resilience in an all-hazards environment by encouraging private sector preparedness. PS-Prep provides a mechanism for organizations to be certified by an accredited third party establishing that the organization conforms to preparedness standards adopted by DHS. Will you be prepared?

## CR 327

### Proactive Management of Hospital Water Supply Systems in Support of the Environment of Care

1:30 p.m.-2:30 p.m. » ICC, 103

**Presenter:** M. Fiore, J. Franke, NorthShore University, Evanston, IL. **Monitor:** C. Roberts, University of Michigan, Ann Arbor, MI.

Providing and sustaining safe domestic and utility water systems require a team approach to proactive water management. Practical experiences at a mid-western four-hospital health system will be shared to elucidate the internal and external challenges, as well as identified best practices, to control water quality. The hospital management approach is based on ASHRAE 188 – *Prevention of Legionellosis Associated with Building Water Systems* and fulfills the intent of The Joint Commission Environment of Care requirement for safe hospital water supply systems.

## Special Session

### Emerging Issues — Carbon Monoxide: A Persistent Problem

1:30 p.m.-3:00 p.m. » ICC, 205

Carbon Monoxide exposure overexposure has been an issue for a long time, but frequently gets overlooked as industrial hygienists concentrate on other more complicated issues. This session will provide a recent case study where CO levels were elevated in a downtown office building during renovation work and an update on current sources of and issues with Carbon Monoxide. There will be an interactive discussion with attendees to include an opportunity to share their experiences and ask questions of the presenters.

- **Carbon Monoxide Emitted from a Portable Propane Generator Being Used During Renovation of a Downtown Office Building — Case Study.** J. Morawetz, ICWUC Center for Worker H&S Education, Cincinnati, OH.
- **Overview of Residential Danger, Sources and Magnitude of Problem.** E. Pinzer, U.S. Department of Housing and Urban Development, Washington, DC.

## RT 234

### Sustainability/CSR Reporting and the OHS Missing Link

1:30 p.m.-3:30 p.m. » ICC, 125

**Arranger:** C. Redinger, Redinger EHS, Inc., Harvard, MA. **Moderator:** D. Hudson, ASSE, Des Plaines, IL. **Monitors:** D. Martin, Pacific Biosciences, Menlo Park, CA; A. Lehocky, Vanderbilt University, Nashville, TN.

It is hard to overstate the prominence of sustainability and corporate social responsibility (CSR). While there are a plethora of ways to define sustainability/CSR, voluntary and mandatory reporting frameworks drive the way organizations develop their programs in this space. A weak link in reporting frameworks are robust occupational health and safety (OHS) performance measures and metrics. This roundtable examines important and timely issues for IH and safety professionals on sustainability/CSR reporting challenges and solutions. Four presentations and an interactive discussion will include: an overview of reporting frameworks with a focus on the Global Reporting Initiative (GRI) and their next generation framework; an introduction to the Center for Safety and Health sustainability's framework; an examination of GRI's current G3 OHS metrics and challenges with reporting on them; and a description of important issues that IH and OHS professionals need to know about trends in integrated and mandatory sustainability/CSR reporting. Attendees will gain insight and practical tips on how to strengthen their skills and value to their organization, improve sustainability/CSR programs, and navigate complex reporting frameworks.

- **The Global Reporting Initiative's Trajectory and the Evolution of Sustainability Reporting.** M. Wallace, Global Reporting Initiative, New York, NY.
- **Strengthening Worker Safety and Health in the Sustainability/CR Space.** T. Cecich, TFC & Associates, Apex, NC.
- **Nuts and Bolts of OHS in GRI G3 and Upgrades for the Upcoming G4 in 2013.** Z. Mansdorf, EHS and Sustainability, Boca Raton, FL.
- **Integrated Reporting — What Is it and Why IHS and Safety Professionals Need to Know About it.** C. Redinger, Redinger EHS, Inc., Harvard, MA.

## RT 227

### Ten Years Since the U.S. Anthrax Incidents: Engaging the IH Community

1:30 p.m.-4:00 p.m. » ICC, Wabash 2

**Arranger and Moderator:** B. Fraser, Health Canada, Ottawa, ON, Canada. **Monitors:** P. Dulaney, Applied Environmental, Inc., Cary, NC; R. Strode, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

This roundtable panel will discuss managing an incident of bioterrorism in the built environment from an industrial hygiene perspective. Major themes to be addressed include: (1) Identifying the critical steps that must be taken in the event of suspected release of a particulate biological agent, such as anthrax, in a building. (2) What should be done/not done based on lessons learned from the 2001 incidents in the U.S., previous incidents, and more recent experience from research and other studies. (3) Occupant management immediately after an event to protect public health and to minimize the unnecessary spread of contamination within the building and elsewhere after an event. (4) Managing social consent to maximize the probability of re-occupancy. (5) Appropriate methods of sampling and analysis, as well as personal and area decontamination. (6) Outline the findings from the series of anthrax response workshops carried out by DHS. (7) Perspective from Europe.

- **Exposure Characterization for Anthrax Incidents Since 2001 — Intentional and "Natural" Releases.** K. Martinez, NIOSH, OH.
- **Decontaminating Anthrax Across Borders.** S. Casey, Government Decontamination Service, Stafford, United Kingdom.
- **Findings from an Anthrax Exercise Series Conducted in 10 FEMA Regions in the U.S.** J. Ignacio, Department of Homeland Security, Washington, DC.
- **Occupant Management after a Bio-Incident and Subsequent Building Reoccupancy: The Current Situation and Priorities for Future Activities.** J. Miller, Carleton University, Ottawa, ON, Canada.

## PO 120

### Engineering Controls — Lessons from Design and Practice

1:30 p.m.-4:10 p.m. » ICC, 209

**Arrangers:** J. Leung, Shell Canada Ltd., Calgary, AB, Canada; S. Durgam, GE, Cincinnati, OH. **Moderator:** J. Leung, Shell Canada Ltd., Calgary, AB, Canada. **Monitors:** J. McKernan, Cincinnati, OH; V. Kero, Hackensack, NJ.

1:30 p.m.-1:50 p.m.

**CS-120-1 Using Prevention Through Design Principles at a Plastics Extrusion Facility to Improve Ventilation and Reduce Noise and Ergonomic Stressors.** E. Pullen, Clariant Corp., Charlotte, NC.

1:50 p.m.-2:10 p.m.

**CS-120-2 Health/Odor Design Criteria Development for Assessing Exhaust Impacts at Fresh Air Intakes and Sensitive Locations.** J. Reifschneider, R. Petersen, CPP, Inc., Fort Collins, CO.

2:10 p.m.-2:30 p.m.

**CS-120-3 Specialized Engineering Controls for Hexavalent Chromium and Cobalt in Metal Manufacturing.** L. Verdier, Shaw Environmental, Inc., Cincinnati, OH; S. Fischer, Haynes International, Kokomo, IN.

2:30 p.m.–2:50 p.m.

**CS-120-4 Industrial Hygiene Verification Study for a Contained Filter Dryer at a Pharmaceutical Chemical Pilot Plant.** A. Yoshida, R. Prodans, Abbott Laboratories, Abbott Park, IL.

2:50 p.m.–3:10 p.m.

**CS-120-5 The Application of a Positive Displacement Ventilation Protocol in an Industrial Precious Metal Refining Facility.** W. Mele, D. Hall, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; C. Ellwood, AOEI, LLC, Black Hawk, CO.

3:10 p.m.–3:30 p.m.

**CS-120-6 Reducing Airborne Exposures and Community Nuisance Odors at a Foundry.** G. Croteau, University of Washington, Seattle, WA.

3:30 p.m.–3:50 p.m.

**CS-120-7 Occupational Exposure Controls: IH Meets CSI.** T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.

3:50 p.m.–4:10 p.m.

**CS-120-8 So, You Want to Renovate Your Anatomy Labs and Morgue? Lessons Learned: 5 Years Post-Lab Renovation.** J. Whitlock, Wright State University, Dayton, OH.

## PO 121

### Environmental Issues for the EH&S Practitioners

1:30 p.m.–4:30 p.m. » ICC, 104

**Arranger:** L. Wong, University of California, Oakland, CA. **Moderator:** B. Ujjani, URS Corporation, Wayne, NJ. **Monitors:** D. Hurley, CertainTeed Corp., North Wilkesboro, NC; M. McGowan, HydroGeoLogic, Inc., Reston, VA.

1:30 p.m.–1:50 p.m.

**Committee Award Presentation**

1:50 p.m.–2:10 p.m.

**CS-121-1 Redeveloping an Abandoned Industrial Property – Resolving a Stalemate with Local Government and a Neighboring Community.** S. Popelar, F. Boelter, ENVIRON, Chicago, IL.

2:10 p.m.–2:30 p.m.

**SR-121-2 An Analysis of Formaldehyde Levels in Travel Trailers.** P. Hewett, Exposure Assessment Solutions, Inc., Morgantown, WV.

2:30 p.m.–2:50 p.m.

**SR-121-3 Air Contaminants Inside and Outside Rural Homes Near Biosolids-Applied Agricultural Farm Fields.** F. Akbar-Khanzadeh, A. Ames, S. Milz, D. Carlson, T. Koch, J. Kabelen, K. Czajkowski, University of Toledo, Toledo, OH.

2:50 p.m.–3:10 p.m.

**SR-121-4 Evaluation of Carbon Monoxide Exposures During the Operation of Recreational Watercraft.** D. Stephenson, Boise State University, Boise, ID.

3:10 p.m.–3:30 p.m.

**SR-121-5 WITHDRAWN The Association Between Residential Proximity to Swine Animal Feeding Operations and Childhood Asthma.** B. Pavilonis, The University of Iowa, Iowa City, IA.

3:30 p.m.–3:50 p.m.

**CS-121-6 Bed Bugs – What to Do About Unwanted Houseguests.** M. Shum, National Collaborating Centre for Environmental Health, Vancouver, BC, Canada.

3:50 p.m.–4:10 p.m.

**SR-121-7 Emission Factors and Exposures from Ground Level Pyrotechnics.** G. Croteau, R. Dills, M. Beaudreau, M. Davis, University of Washington, Seattle, WA.

4:10 p.m.–4:30 p.m.

**SR-121-8 Determinations of 1,4-Dioxane and Phthalates in Water Simultaneously by Solid-Phase Microextraction.** W. Lin, S. Tsai, National Taiwan University, Taipei, Taiwan; Y. Tseng, Morrison Christian Academy, Taichung, Taiwan.

## PO 122

### Noise: Evaluation, Control, and Hearing Conservation

1:30 p.m.–4:30 p.m. » ICC, 202

**Arranger and Moderator:** C. Johnson, 3M, St. Paul, MN. **Monitors:** C. Hovde, Caterpillar, Roseville, MN; K. Merritt, Mainthia Technology, Inc., Hampton, VA.

1:30 p.m.–1:50 p.m.

**CS-122-1 Using the HUD Noise Guidelines for Community Noise and Building Acoustical Design.** S. Rucker, Ecostratum, LLC, Cincinnati, OH; T. Waldron, D3G, Glenn Allen, VA.

1:50 p.m.–2:10 p.m.

**CS-122-2 Successful Noise Control Engineering in a Bagging Plant.** R. Stewart, Oldcastle Building Products, Wyomissing, PA.

2:10 p.m.–2:30 p.m.

**CS-122-3 WITHDRAWN Implementing HPD Fit-Testing into a Hearing Conservation Program.** S. Henderson, Chevron Phillips Chemical Company, LP, Old Ocean, TX.

2:30 p.m.–2:50 p.m.

**CS-122-4 Does Handedness or Order of Test Effect Earplug Fit Results?** T. Schulz, Honeywell Safety Products, Fredericktown, PA; R. Allomong, ConAgra Foods, Archbold, OH.

2:50 p.m.–3:10 p.m.

**SR-122-5 Evaluation of Exposure to Noise and Hearing Loss Among Dentists in Yazd.** N. Tahmaseby, Yazd University, Yazd, Islamic Republic of Iran.

3:10 p.m.–3:30 p.m.

**CS-122-6 Cicada Invasion! Noise Study of Brood XIX.** M. Bogard, Vanderbilt University, Nashville, TN.

3:30 p.m.–3:50 p.m.

**SR-122-7 Peak Noise Exposure During Concrete Grinding in Confined Areas.** F. Akbar-Khanzadeh, S. Milz, A. Ames, C. Wagner, J. Laughlin, University of Toledo, Toledo, OH.

3:50 p.m.–4:10 p.m.

**SR-122-8 Evaluation of Noise Exposure Among Brazilian Headphone/Headset Professional Users.** W. Iramina, S. Eston, University of Sao Paulo, Sao Paulo, Brazil; J. Felicio, City Hall (Prefeitura), Jundiai, Brazil; M. Da Silva, Doulos Ambiental, Sao Paulo, Brazil.

4:10 p.m.–4:30 p.m.

**SR-122-9 Noise Exposure Assessment in a Dental School.** T. Choosong, P. Phakthongsuk, W. Srisintorn, C. Kongkamol, Prince of Songkla University, Hat-Yai, Songkhla, Thailand.

## RT 229

### Application of Computational Fluid Dynamics in Industrial Hygiene

1:30 p.m.–4:30 p.m. » ICC, 127

**Arranger:** E. Lee, NIOSH, Morgantown, WV. **Moderator:** M. Harper, NIOSH, Morgantown, WV. **Monitors:** T. Lee, S. Kim, NIOSH, Morgantown, WV.

Computational fluid dynamics (CFD) has seen wide application for solving engineering problems, especially for aerodynamic design of automobiles and aircraft. However, it has seen limited use for calculating gas and particle transport relevant to industrial hygiene due to the complexity of underlying mathematics. With the development of user-friendly and commercially available software and improvements in model accuracy, CFD is becoming a powerful tool for occupational health professionals from macro to micro applications for understanding air and contaminant transport within the working environment. This roundtable introduces the current state-of-science of CFD for industrial hygiene applications, including workroom exposures, sampler design and performance, engineering controls, and human exposure models. Using examples of CFD simulations applied to these applications, the panel will discuss the strengths and weaknesses of the CFD capability, including the need for model validation. The panel will also address the future of using CFD modeling tools.

- **Incorporating CFD into Exposure Assessments: An Introduction.** T. Anthony, The University of Iowa, Iowa City, IA.
- **Overview of Prediction of Workroom Exposures Using CFD.** E. Lee, NIOSH, Morgantown, WV.
- **CFD Applications for Exposure Assessment and Control in NIOSH.** K. Dunn, NIOSH, Cincinnati, OH.
- **Use of CFD in Modeling Workers' Exposure.** K. Anderson, The University of Iowa, Iowa City, IA.
- **The Challenges of Boundary Conditions and Method Validation.** C. Feigley, University of South Carolina, Columbia, SC.
- **Advantages of Advanced CFD for Enhancing Industrial Hygiene Evaluations.** A. Bird, Oakland University, Rochester, MI.

## RT 230

### Challenging Confined Spaces

1:30 p.m.–4:30 p.m. » ICC, 120

**Arranger:** M. DeVany, DeVany Industrial Consultants, Vancouver, WA. **Moderator:** W. Brown, ISHM, Fairborn, OH. **Monitors:** W. Lashbrook, DeVany Industrial Consultants, Vancouver, WA; G. Crawford, Roy F. Weston, Inc., West Chester, PA.

Workers entering confined spaces are not always trained to recognize when the work to be done can change the confined space from safe to potentially fatal. This failure to recognize new hazards brought by the work to be done inside the confined space — requiring reclassifying the non-permit required confined space into a permit-required one — is an all too common and sometimes fatal mistake. In this seventh annual Challenging Confined Spaces Roundtable, seasoned C.S. entry experts explore the hazards of work performed in confined spaces, emphasizing how the work done inside can change the task from routine and safe to fatal. In some of the presentations, the fatal conditions were recognized and eliminated, or at least acceptably controlled, protecting the safety and health of the workers inside. In others, the outcome was serious injury or death.

- **When Clean Tanks Explode — Understanding Unseen Hazards.** S. Thomas, OSHA, Bend, OR.
- **“True Grit:” Elevated Grit-Filled Confined Space Evades Detection.** C. Muncy, Donnelsville, OH.
- **H<sub>2</sub>S, Froth and Non-Newtonian Fluids: A Deadly Combination.** N. McManus, NorthWest Occupational Health & Safety, North Vancouver, BC, Canada.
- **Maintaining a Wheelabrator Confined Space.** T. Krug, EXOSHA, Inc., Bartlett, IL.
- **Challenging Confined Space Entry During Furnace Cleaning Activities.** A. DeRose, Indianapolis Power & Light Company, Indianapolis, IN.

## RT 231

### The Future of EHS: Past to Present

1:30 p.m.–4:30 p.m. » ICC, 243

**Arranger:** K. Slates, Indiana University, Bloomington, IN. **Moderator:** J. Lucas, Cordis Corporation, Warren, NJ. **Monitors:** L. Goodridge, Chevron, Covington, LA; W. Washington, Panhandle Energy, Houston, TX.

Our goal is to engage in thought-provoking, meaningful dialogue and to stimulate discussion that raises questions and challenges professionals regarding what changes are necessary to sustain the future of EH&S. The first speakers will give retrospective and prospective points of view of how environmental health and safety has been redefined through the years. Ms. Norris will lay the foundation of the roundtable with how the profession is now integrated at various levels of business and different stakeholders. Ms. Seabrook will focus on how EHS management has been influenced from global events. Dr. Grimsley will provide information on how women have

changed the culture of EHS in the workplace. The last two speakers of the roundtable will engage the audience with specific real-world examples of past experiences. Dr. Brown will speak to the benefits and challenges faced by minority women EHS professionals. Dr. Toca's presentation will guide the audience through developing a lifelong plan to succeed as EHS professionals.

- **How to Succeed by Really Trying.** F. Toca, Atlantic Environmental, Inc., Atlanta, GA.
- **Government, Private Industry, and Academia: Coming Full Circle.** L. Brown-Ellington, Illinois State University, Normal, IL.
- **Women and Diversity in the Field of Environmental Health and Safety: Now and Later.** F. Grimsley, Tulane University, New Orleans, LA.
- **Globalization EHS Now and Then.** K. Seabrook, ASSE, Mendham, NJ.
- **EHS Now and Then.** T. Norrie, ASSE, Long Beach, CA.

## RT 232

### The Next Generation of Technical Leaders: IH Student Research Showcase

1:30 p.m.–4:30 p.m. » ICC, 102

**Arranger and Moderator:** P. Smith, OSHA, Sandy, UT. **Monitors:** B. Groves, Penn State University, University Park, PA; M. Roe, 3M, Blaine, MN.

This roundtable brings together our newest leaders in research related to real-time detection. Participants are students who will present high-quality applied research projects where real-time detection systems were studied or used to improve our profession's ability to protect worker health.

- **Field Portable X-Ray Fluorescence for Rapid Detection of Engineered Nanomaterials.** B. Hill, The University of Iowa, Iowa City, IA.
- **Collection of Micron Particles in a Continuous Open Water Channel System.** M. Martin, University of Cincinnati, Cincinnati, OH.
- **Modular Quantitative Air Sampler for Field Analysis Using Person-Portable Gas Chromatography — Mass Spectrometry.** T. Juarez, Uniformed Services University of the Health Sciences, Bethesda, MD.
- **Exposure to Diesel Particulate Matter at the Loading Bay of the Physical Plant Building at the University of Central Missouri.** P. Kuffour, University of Central Missouri, Warrensburg, MO.
- **Exposure Assessment of Taconite Mines Using Direct-Reading Instruments for Multiple Metrics.** T. Huynh, University of Minnesota, Minneapolis, MN.
- **Early Criteria for Evaluating the Cardiovascular and Psychophysical Effects of Heat Stress on Firefighters.** A. Mani, University of Cincinnati, Cincinnati, OH.

## PO 123

### Respiratory Protection

1:30 p.m.–4:50 p.m. » ICC, 203

**Arrangers:** W. Bishop, MI; L. Janssen, Larry Janssen Consulting, LLC, Stillwater, MN. **Moderator:** L. Janssen, Larry Janssen Consulting, LLC, Stillwater, MN. **Monitors:** J. Noble, Ascend Performance Materials, Pensacola, FL; P. Swearingen.

1:30 p.m.–1:50 p.m.

**SR-123-1 Patterns of Respirator Performance and Associated Facial Variability.** Z. Zhuang, M. Bergman, NIOSH, Pittsburgh, PA; D. Slice, Florida State University, Tallahassee, FL.

1:50 p.m.–2:10 p.m.

**SR-123-2 Development of an Advanced Respirator Fit Test Headform.** M. Bergman, Z. Zhuang, A. Palmiero, R. Shaffer, NIOSH, Pittsburgh, PA; J. Wander, U.S. Air Force, Tyndall Air Force Base, FL; D. Hanson, Hanson Robotics, Inc., Plano, TX; B. Eimer, URS Corp., Pittsburgh, PA.

2:10 p.m.–2:30 p.m.

**SR-123-3 Fit Test of N95 Filtering Facepiece Respirators Used Widely in China.** Y. Yu, L. Jiang, W. Chen, Huazhong University of Science and Technology, Wuhan, China.

2:30 p.m.–2:50 p.m.

**SR-123-4 Computational Fluid Dynamics for Respirator Fit and Leak Locations.** J. Yang, Z. Lei, Texas Tech University, Lubbock, TX.

2:50 p.m.–3:10 p.m.

**SR-123-5 Comparison of a Small-Scale Cartridge Breakthrough Tests to Actual Organic Air-Purifying Respirator Cartridge.** F. Janvier, J. Lara, L. Tuduri, Université de Montréal, Montreal, QC, Canada; D. Cossement, Université du Québec à Trois Rivières, Trois Rivières, QC, Canada; D. Drolet, Y. Cloutier, Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSSST), Montreal, QC, Canada.

3:10 p.m.–3:30 p.m.

**SR-123-6 Effect of Aerosol Loading on Breakthrough Characteristics of Charcoal Cartridges.** Y. Kuo, Chung Hwa University of Medical Technology, Tainan, Taiwan; C. Lin, W. Lin, S. Huang, C. Chen, National Taiwan University, Taipei, Taiwan.

3:30 p.m.–3:50 p.m.

**SR-123-7 Penetration of Fibers Through Faceseal Leakage of N95 Filtering Facepiece Respirators.** S. Grinshpun, K. Cho, M. Miller, R. McKay, T. Reponen, University of Cincinnati, Cincinnati, OH; L. Turkevich, NIOSH, Cincinnati, OH; K. Ha, Changwon National University, Changwon, Republic of Korea.

3:50 p.m.–4:10 p.m.

**SR-123-8 Behavior of Nanoparticle Penetration Through Simulated Filtering Facepiece Respirator Faceseal Leaks: Experiment and Theory.** T. Pearce, M. Fries, Z. Zhuang, NIOSH, Pittsburgh, PA.



4:10 p.m.–4:30 p.m.

**SR-123-9 Total Inward Leakage of Nanoparticles Through NIOSH-Approved N95 Filtering Facepiece Respirators.** S. Rengasamy, NIOSH, Pittsburgh, PA; B. Eimer, URS Corp., Pittsburgh, PA.

4:30 p.m.–4:50 p.m.

**SR-123-10 Generation of Vapor-Phase Hydrogen Peroxide Test Atmospheres for the Evaluation of Respirator Cartridges and Air Samplers.** C. Manning, Assay Technology, Livermore, CA.

RT 233

## NIOSH Health Hazard Evaluations: Results of Recent Industrial Hygiene Evaluations

1:30 p.m.–5:30 p.m. » ICC, 240

**Arranger:** B. King, NIOSH, Cincinnati, OH. **Moderator:** K. Wallingford, NIOSH, Cincinnati, OH. **Monitors:** K. Fent, J. Choi, NIOSH, Cincinnati, OH.

The National Institute for Occupational Safety and Health (NIOSH) Health Hazard Evaluation (HHE) program provides a mechanism by which employees, unions, and employers across the United States can request free assistance from NIOSH in addressing occupational health concerns in the workplace. In response to some of these HHE requests, NIOSH industrial hygienists and medical officers perform on-site evaluations and often encounter a wide variety of both common and unique workplace exposures and health hazards. The roundtable will present the results of several HHEs performed by NIOSH industrial hygienists that illustrate a broad spectrum of potential health hazards encountered in workplaces. The overall objective is to provide practicing hygienists with an understanding of how NIOSH industrial hygienists develop their strategy for assessing the workplace. We will also discuss the health hazards that were identified during the evaluations and the recommendations provided to reduce or eliminate the hazards and protect workers.

- **Overview of the NIOSH Health Hazard Evaluation Program.** T. Seitz, NIOSH, Cincinnati, OH.
- **Evaluation of a Marine Mammal Rescue Center in California.** T. Niemeier, NIOSH, Cincinnati, OH.
- **Evaluating a Persistent Nuisance Odor in an Office Building.** G. Burr, NIOSH, Cincinnati, OH.
- **Occupational Exposures During Pesticide Application to Control Sea Lampreys in the Great Lakes.** D. Ceballos, NIOSH, Cincinnati, OH.
- **Health Hazard Evaluation Program Emergency Responder Preparedness Exercise.** R. McCleery, NIOSH, Cincinnati, OH.
- **Evaluation of Heat Stress and Strain Among Employees at an Aluminum Smelter.** C. Dowell, NIOSH, Cincinnati, OH.
- **Exposures to Organic Solvents During Screen Printing.** S. Brueck, NIOSH, Cincinnati, OH.
- **Investigation of a Fatal Laboratory-Acquired Plague Infection.** B. King, NIOSH, Cincinnati, OH.

SS 003

## Exposure Limit Setting Processes: A Multinational Challenge

1:30 p.m.–5:30 p.m. » ICC, 122

**Arranger:** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA. **Moderator:** K. Niven, Shell International, The Hague, Netherlands. **Monitors:** M. Waters, NIOSH, Cincinnati, OH; T. Johnson, 3M, St. Paul, MN.

Industrial Hygienists and allied professionals consider Occupational Exposure Limits (OELs) to be one of the most effective tools for performing risk assessments upon which risk management strategies for worker protection are based. OELs have been established for airborne workplace chemicals by various regulatory and authoritative organizations for well over 60 years now. With the changing regulatory arena, particularly in Europe, shifting centers of manufacturing growth, a move towards a more global perspective on health issues, tendencies towards control banding and the formulation of control assumptions without the apparent use of exposure data, the time to re-examine the continued value of OELs is now, particularly since only about 1,000–2,000 of over 100,000 chemicals in worldwide use are presently either regulated by a government statute or have a guideline OEL. In an effort to define future approaches, the presenters highlight the historical evolution of OELs, the known OEL setting processes today, their role in occupational hygiene and risk assessment, the profiling of other risk related tools to complement traditional exposure limit setting, a clarification of existing tools and their strengths, and today's world community challenges. The symposium will be integrated with audience participation, with a desired outcome of a "defined path forward" for the profession.

- **Poll to Calibrate Audience Knowledge, Expectations, Output From Broader National AIHA Membership Survey.** J. Mulhausen, 3M, St. Paul, MN.
- **Overview: Evolution of Exposure Limits, Changing Landscape and Tools.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.
- **Current and Future Approaches in OEL Setting by Various Agencies and Organizations.** S. Ripple, Dow Chemical Company, Midland, MI.
- **Hazard Banding: A Tool for Setting OELs for Chemicals with Limited Data.** D. Heidel, NIOSH, Cincinnati, OH.
- **Toward Harmonization of a Suite of Tools for Occupational Risk Assessment.** A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH.
- **Tools for Understanding: Strengths, Limitations, Additional Guidance.** J. Mulhausen, 3M, St. Paul, MN.
- **Polling and Closing Remarks.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA; J. Mulhausen, 3M, St. Paul, MN.

CR 328

## Accident Investigation — Effective Techniques and Documentation

3:00 p.m.–4:00 p.m. » ICC, Wabash 3

**Presenters:** J. DeMarco, Bureau Veritas, Downers Grove, IL; G. Dale, Baker & Daniels, Indianapolis, IL.

Unfortunately, accidents can occur despite an employer's proactive safety efforts. Will you know what to do if you are asked to participate in an investigation of an accident? This joint presentation by a seasoned consultant with over 30 years field experience and a 23-year practitioner in the field of OSHA/workplace safety law will cover various investigatory issues including: investigation techniques, interviewing techniques, root cause analysis, identifying corrective actions, documentation, staffing, and management of the investigatory process.

CR 329

## Safety Culture: Motivation and Influence

3:00 p.m.–4:00 p.m. » ICC, 103

**Presenters:** M. Levitsky, O. Malik, ECHO Management, Mississauga, ON, Canada.

This session will explore insights from social sciences and economics that shed light on how health and safety professionals can influence safety culture. Building on highly rated crossover sessions presented at AIHce 2010 and 2011, it will present discoveries from social marketing, behavioral economics, and decision-making theories that help us understand the choices and actions of employers and workers. It will then explore how participants can use these insights to generate strategies for motivating safety culture in their own workplaces.

CR 330

## Industrial Ecology: An Industrial Hygiene Approach

4:30 p.m.–5:30 p.m. » ICC, Wabash 3

**Presenter:** M. O'Reilly, Empire State College, East Syracuse, NY.

Industrial ecology is the science of analyzing resource use and its environmental and cultural impacts during all stages of development (extraction, manufacture, transport, use and disposal). Examples include comparison of life cycle environmental effects between battery operated and conventional gasoline cars and energy use differences between mowing and herbicide application to maintain highway rights-of-way. Industrial hygiene knowledge and skill, from understanding industrial processes to controlling occupational and environmental risk, are essential to the emerging field of industrial ecology.

PO 124

## Indoor Environmental Quality — III

5:00 p.m.–7:00 p.m. » ICC, Wabash 1

**Arranger:** J. Hicks, Exponent, Inc., Oakland, CA. **Moderator:** V. Hawkins, U.S. Army. **Monitors:** S. Vincent, Enercon, Oklahoma City, OK; K. Boyce-Lindgren, Boelter & Yates, Inc., Park Ridge, IL.

5:00 p.m.–5:20 p.m.

**SR-124-1 Assessing Building Occupant Indoor Air Quality Expectations Compared to Nationally Recognized Standards.** S. Lemessa, St. Luke's Episcopal Hospital, Houston, TX.

5:20 p.m.–5:40 p.m.

**CS-124-2 This Classroom Is Making Me Sick! — Resolving Indoor Air Quality Concerns of Teachers and Parents at an Elementary School: A Case Study.** T. Choe, D. Cox, Forensic Analytical Consulting Services, Hayward, CA.

5:40 p.m.–6:00 p.m.

**SR-124-3 A Protocol for Identifying Building Odors.** E. Light, J. Bailey, R. Gay, Building Dynamics, LLC, Ashton, MD.

6:00 p.m.–6:20 p.m.

**SR-124-4 A Protocol for the Assessment of Smoke Damage.** M. King, Martin Churchill Associates, Arlington, VA; E. Light, Building Dynamics, Ashton, MD; B. Spiegel, Spiegel Property Damage Consulting, La Verne, CA.

6:20 p.m.–6:40 p.m.

**SR-124-5 Indoor Air Quality of Hair and Makeup Trailers in the Vancouver Motion Picture Industry.** W. Quirke, University of British Columbia, Vancouver, BC, Canada; D. Brennan, ActSafe, Vancouver, BC, Canada.

6:40 p.m.–7:00 p.m.

**SR-124-6 Measured Air Exchange Rates in Two Homes in Rural Peru.** P. Williams, E Risk Sciences, LLP, Boulder, CO; K. Unice, ChemRisk, Pittsburgh, PA.

RT 235

## How to Effectively Implement the New Hazcom (GHS) — A Chemical User's Perspective

5:00 p.m.–7:30 p.m. » ICC, Wabash 2

**Arranger:** D. Deeds, Industrial Health & Safety Consultants, Shelton, CT. **Moderator:** S. Dawson, DuPont, Pascagoula, MS. **Monitors:** V. Murray, BP, Houston, TX; C. Gioiello, Industrial Health & Safety Consultants, Naperville, IL.

Much of the work to transition to the GHS will fall on chemical manufacturers, but there are changes that will affect the chemical user as well. This roundtable will provide practical information on how to effectively implement the new and revised requirements of the Hazard Communication Standard in your facility, as a user of chemicals.

- **What Is the GHS and What Do You Need to Do?** D. Deeds, Industrial Health & Safety Consultants, Shelton, CT.
- **How GHS Will Change In-Plant Labeling Systems.** S. Williams, Alcoa Inc., Pittsburgh, PA.
- **WITHDRAWN GHS Implementation: Stories from the Field.** E. Quevedo, Paladin Law Group LLP, Walnut Creek, CA.
- **Examples of How Advanced Training Technologies Can Improve Your Hazard Communication Training.** T. Ouimet, Yale University, Plantsville, CT.
- **GHS and Hazard Communication Program Modifications.** R. Quevedo, URS Corporation, San Jose, CA.

RT 236

## Applying Bayesian Data Analysis in the Real World to Solve Real Problems

5:00 p.m.–7:30 p.m. » ICC, 102

**Arranger:** K. Bailey, Vulcan Materials Company, Birmingham, AL. **Moderator:** P. Logan, 3M, St. Paul, MN. **Monitors:** P. Logan, 3M, St. Paul, MN; D. Drysdale, National Stone Sand and Gravel Association, Alexandria, VA.

Bayesian Decision Analysis (BDA) has become a popular term connected to exposure assessment strategies. Presentations and publications about BDA seem to suggest that it can help make an exposure assessment program more effective and efficient. However, Bayesian statistics sounds like something so complicated that the average company could not possibly implement it. This roundtable will show the journey of one very large mining company that was able to implement BDA into their exposure assessment program. The presenters will describe how simple tools, training, and some good planning were used to get a solid program implemented with impressive results. Learn how to apply this exciting new approach to exposure assessment in the real world.

- **Company Overview and Historical Sampling Strategies — Where Do We Go from Here?** K. Bailey, Vulcan Materials Company, Birmingham, AL.
- **Designing a Sampling Strategy that Performs Effectively and Efficiently.** P. Hewett, Exposure Assessment Solutions, Inc., Morgantown, WV.
- **You Mean We Are Going to Train People in Bayesian Analysis as Well as How to Collect a Sample?** A. Perkins, Vulcan Materials Company, Birmingham, AL.
- **Systems Used to Manage Dust and Noise Sampling Data, Bayesian Statistical Output, and Decisions that Drive Actions.** A. Perkins, Vulcan Materials Company, Birmingham, AL.
- **Optimizing Sampling Efforts with BDA to Establish and Maintain Solid Occupational Health Programs.** K. Bailey, Vulcan Materials Company, Birmingham, AL.
- **Panel Discussion.**

CR 331

## Safety Contacts: Caught You Doing Something Right

6:00 p.m.–7:00 p.m. » ICC, Wabash 3

**Presenter:** J. LaBelle, Superior Essex, Fort Wayne, IN.

This presentation details a key ongoing safety management concept called "Safety Contacts." A Safety Contact is a behavior-reinforcing conversation between employees and defined as regularly and positively recognizing employees for the safe behaviors that they exhibit. The Safety Contact process was designed from the ground up to be personal, one-on-one, behavior encouraging, behavior improving, and, most importantly, behavior reinforcing. Key outcomes identified with this process are employees are more likely to repeat safe behaviors when they are positively and regularly recognized for them.



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The findings and conclusions in the National Institute for Occupational Safety and Health abstract presentations have not been formally disseminated by the National Institute for Occupational Safety and Health and should not be construed to represent any agency determination or policy.

## Thursday, June 21

7:00 a.m.–11:30 a.m.

Speaker Ready Room  
ICC, 108

7:30 a.m.–10:30 a.m.

Registration  
ICC, Wabash Lobby

8:00 a.m.–Noon

RT 237 Glen Williamson Forum: OSHA's Most Interesting Health Cases, 2009–2011  
ICC, 125

8:00 a.m.–5:00 p.m.

Train the Trainer Workshop  
ICC, 103

8:30 a.m.–9:30 a.m.

CR 332 Health and Safety Auditing for Industrial Hygienists  
ICC, 102

8:30 a.m.–10:00 a.m.

Smart Apps for Smart People  
ICC, Volunteer Collaboration Cafe

8:30 a.m.–10:30 a.m.

PO 119 Biosafety and Environmental Microbiology  
ICC, 203

PO 125 Green Buildings and the Industrial Hygienist  
ICC, 202

8:30 a.m.–10:50 a.m.

PO 126 Risk Assessment/Risk Management Case Studies  
ICC, Wabash 3

8:30 a.m.–11:00 a.m.

RT 238 Global Professional Ethics Roundtable Discussion  
ICC, 127

RT 239 Innovative Hearing Conservation—Preventing Noise-induced HL in “Kids” of all Ages

ICC, Wabash 2

8:30 a.m.–11:10 a.m.

PO 127 Management and Communication in OSH  
ICC, Wabash 1

10:00 a.m.–11:00 a.m.

CR 333 Taking Process Safety and Catastrophic Event Prevention to the Next Level  
ICC, 102

Noon–1:00 p.m.

Stokinger Award Lecture  
ICC, Wabash 1

12:30 p.m.–4:30 p.m.

Speaker Ready Room  
ICC, 108

1:00 p.m.–2:00 p.m.

CR 334 Understanding Corporate Social Responsibility: New Opportunities for EHS Professionals  
ICC, 102

1:00 p.m.–4:00 p.m.

PO 128 Sampling and Analysis: Current Trends in Workplace Exposure Assessments  
ICC, Wabash 3

PO 129 Biological Monitoring and Aerosols  
ICC, 125

SS 004 Science Symposium: Assessing Exposure During Disaster Response: The Gulf Oil Spill Experience

ICC, Wabash 2

1:00 p.m.–4:30 p.m.

RT 240 Radiation Emergency Response and Annual Memorial Tribute to Dr. Herman Cember  
ICC, 120

1:00 p.m.–5:00 p.m.

RT 241 Honing Your Competitive Edge in the Battle for the Bucks  
ICC, 127

2:30 p.m.–3:30 p.m.

CR 335 Enhancing Chemical Management Within the Framework of Existing TSCA Regulations  
ICC, 102

## AIHA®

8:00 a.m.–5:00 p.m.

AIHA Registry Programs Competency Assessments  
JW Marriott, 101

8:30 a.m.–10:00 a.m.

Volunteer Group Chairs Meeting  
ICC, 210

8:30 a.m.–10:30 a.m.

AIHA Annual Business Meeting  
ICC, 120

9:00 a.m.–5:00 p.m.

WEEL Committee  
JW Marriott, 105

10:00 a.m.–11:00 a.m.

Local Sections Officers Training  
JW Marriott, 106

10:00 a.m.–11:30 a.m.

Volunteer Group Secretaries Orientation Meeting  
ICC, 211

11:00 a.m.–4:00 p.m.

AIHA Board of Directors Meeting  
JW Marriott, 104

## Ancillary

8:00 a.m.–5:00 p.m.

Honeywell IH Meeting (by invitation)  
JW Marriott, 312

Note Meeting Rooms ...  
ICC = Indiana Convention Center

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RT 237

**Glen Williamson Forum:  
OSHA's Most Interesting  
Health Cases, 2009-2011**

8:00 a.m.–Noon » ICC, 125

**Arranger and Monitor:** C. Coe, OSHA, Atlanta, GA.

**Moderator:** K. Motley, OSHA, Sandy, UT. **Monitor:** R. Fairfax, OSHA, Washington, DC.

The forum is in honor of the former OSHA Region VI Deputy Regional Administrator who died suddenly at the age of 49 in 1997. He was a leader in the field of industrial hygiene, as well as for OSHA. The goal of the forum is to raise awareness about the role of the regulator in addressing workplace health hazards, to illustrate real-life workplace scenarios, and to show the application and effectiveness of control methods and solutions. The cases presented will highlight exposure levels at the initiation of the OSHA visit, and results that demonstrate reduction in or elimination of the hazard. Attendees will gain practical information regarding exposure assessment and control, as well as learn more about OSHA's approach to workplace health issues. The forum will be interactive, with attendees having the opportunity to ask questions of the panel as the presentations are made.

- **Cotton Dust Exposures in Absorbent Boom Manufacturing.** K. Matson, OSHA, Milwaukee, WI.
- **Lead, Vanadium and Iron Oxide Exposures During Bridge Reconstruction.** M. Westmoreland, OSHA, Jackson, MS.
- **Noise Exposures in a Meat Packing Plant.** C. Synak, OSHA, Omaha, NE.
- **Overexposures to Hexavalent Chromium in Structural Steel Fabrication.** J. Cheng, OSHA, Wichita, KS.
- **Process Safety Management in Grain Handling.** P. Pisasale, OSHA, Omaha, NE.
- **Lead Exposure at an Indoor Pistol Shooting Range.** P. Mitch, OSHA, Greenwood Village, CO.
- **Chlorodifluoromethan "R-22" Asphyxiation at an Ice Rink.** D. Keown, OSHA, Mobile, AL.
- **Heat Stress Fatality of a Latino Landscaping Employee.** J. Nevarez, OSHA, North Aurora, IL.
- **Lead and Cadmium Exposures at a Radiation Therapy Facility.** L. Smith, OSHA, Columbus, OH.
- **Overexposure to Lead and Hexavalent Chromium During Hard Chrome Plating of Toilet Seat Molds.** K. Robertson, OSHA, Milwaukee, WI.

**New!**

**Smart Apps for Smart People**

8:30 a.m.–10:00 a.m. » ICC, Volunteer Collaboration Café

Drop by this App Open House to share, collaborate, or learn how to bump, download, and swipe your way to better use of your favorite smart phone or tablet. Bring your device, learn from your peers and share your favorites in this loosely structured, hands-on session.

**Special Session**

**Train the Trainer Workshop  
Using Statistics in  
Improving IH Exposure  
Judgments ("Running from  
Dart Throwing Monkeys")**

8:00 a.m.–5:00 p.m. » ICC, 103

Open only to college and university IH professors.

Purchase tickets at registration by Noon, Wednesday.

CR 332

**Health and Safety Auditing  
for Industrial Hygienists**

8:30 a.m.–9:30 a.m. » ICC, 102

**Presenter:** D. Regelbrugge, ENVIRON, Park Ridge, IL.

**Monitor:** B. Kissel, Indiana State University, Shadyside, OH.

Each year thousands of employees are seriously injured at work due to workplace accidents; some never return home, victims of tragic accidents. These accidents will forever change the individual injured, their families, and the businesses they work for. Many of these accidents could have been prevented had a thorough health and safety audit been performed in the workplace. This presentation will focus on the various types of audits, the tools available, and procedures necessary to conduct an audit and follow-up.

PO 119

**Biosafety and Environmental  
Microbiology**

8:30 a.m.–10:30 a.m. » ICC, 203

**Arranger and Moderator:** D. Hurley, CertainTeed Corp., North Wilkesboro, NC. **Monitors:** P. Hauck, Glen Cove, NY; C. Peart, Merck, West Point, PA.

8:30 a.m.–8:50 a.m.

**CS-119-1 A Proficiency Demonstration Process for BSL-2 Research Labs.** K. Nobrega, Specialty Technical Consultants, Amherst, MA; N. Kho, D. Keys, S. Pepper, Gilead Sciences, Inc., Foster City, CA.

8:50 a.m.–9:10 a.m.

**CS-119-2 How the 20/20 Rule Reduced the Amount of Violations from the Ohio EPA.** W. Palmer, Wright State University, Dayton, OH.

9:10 a.m.–9:30 a.m.

**CS-119-3 U.S. Department of Energy's Integrated Safety Management (ISM): Applications at the National Biodefense Analysis and Counter-measures Center.** V. Landon, Battelle National Biodefense Institute, Fort Detrick, MD.

9:30 a.m.–9:50 a.m.

**CS-119-4 Sampling for Airborne Fungi: Consequences of Not Planning Ahead.** H. Burge, EMLab P&K, San Bruno, CA.

9:50 a.m.–10:10 a.m.

**SR-119-5 Reduction of Aflatoxin B1 Mycotoxin Using Allotropic Oxygen.** M. McPherson, Scientific Analytical Institute, Greensboro, NC.

10:10 a.m.–10:30 a.m.

**CS-119-6 Not Your Typical Dust in the Wind: Investigations of Coccidioidomycosis (Valley Fever) Cases.** B. Kollmeyer, M. Canright, Forensic Analytical Consulting Services, Rancho Dominguez, CA.

PO 125

**Green Buildings and the  
Industrial Hygienist**

8:30 a.m.–10:30 a.m. » ICC, 202

**Arranger:** L. Kimmelman, EDI, Riverside, IL. **Moderator:** M. DeVany, DeVany Industrial Consultants, Vancouver, WA. **Monitors:** E. Massawe, Southeastern Louisiana University, Hammond, LA; V. Hillman, Liberty Mutual Group, Hopkinton, MA.

8:30 a.m.–8:50 a.m.

**SR-125-1 Health and Housing Outcomes in Green Renovation.** D. Jacobs, J. Breyse, S. Dixon, S. Aceti, National Center for Healthy Housing, Washington, DC; M. James, Community Planning Development Corporation, Washington, DC; J. Wilson, Wiencek Architects, Inc., Washington, DC.

8:50 a.m.–9:10 a.m.

**CS-125-2 Integrating Safety and Health into Green Building Rating Systems: NORA-Developed "Enhanced" Credit Examples.** M. Gillen, NIOSH, Washington, DC.

9:10 a.m.–9:30 a.m.

**CS-125-3 Changing Building Codes to Reduce the Prevalence of Mold Growth Problems.** B. Sothorn, Microecologies, Inc., New York, NY.

9:30 a.m.–9:50 a.m.

**CS-125-4 Green Paradox? Case Studies Illustrating Worker Health Impacts of Some "Green" Technologies.** B. Epstien, Epstien Environmental Resources, LLC, Marietta, GA.

9:50 a.m.–10:10 a.m.

**SR-125-5 Health Status of Corrosive Drywall Home Occupants.** H. Weiner, HM Weiner MD, Boca Raton, FL; E. Light, Building Dynamics, Ashton, MD; B. Manis, Building Health Sciences, Rockville, MD.

10:10 a.m.–10:30 a.m.

**CS-125-6 The Role of Indoor Environmental Professionals in an ANSI Standard-Based Moisture Management and Mold Prevention Program Complying with the New IgCC.** E. Horner, Air Quality Sciences, Inc., Marietta, GA.

## PO 126

**Risk Assessment/Risk Management Case Studies**

8:30 a.m.–10:50 a.m. » ICC, Wabash 3

**Arrangers:** P. Williams, E Risk Sciences, LLP, Boulder, CO; B. Heckman, LaCroix Davis LLC, Mechanicsburg, PA. **Moderator:** B. Heckman, LaCroix Davis LLC, Mechanicsburg, PA. **Monitors:** G. Bratt, U.S. Army, APG, MD; M. Sullivan, California State University, Northridge, CA.

8:30 a.m.–8:50 a.m.

**CS-126-1 Benzene Risk — Informing a Model with Sampling Data, Odor Descriptions, and Biological Indicators.** F. Boelter, ENVIRON, Chicago, IL.

8:50 a.m.–9:10 a.m.

**CS-126-2 The Chemical Formulation Conundrum in Risk Management.** D. Lillquist, G. Schultz, W. Hendricks, OSHA, Salt Lake City, UT.

9:10 a.m.–9:30 a.m.

**CS-126-3 WITHDRAWN Rating the Occupational Health Risks by Developing the Health Risk Register for Operational Facilities in Kuwait Oil Company (KOC), Kuwait: A Qualitative Approach for Occupational Health Risk Management.** D. Al-Gharabally, W. Siddiqi, R. Ayyappan, Kuwait Oil Company, Ahmadi, Kuwait.

9:30 a.m.–9:50 a.m.

**CS-126-4 Application of Control Banding Concept in Indian's Leading Pharmaceutical Company.** M. Patel, Bureau Veritas, Abu Dhabi, United Arab Emirates; V. Vyas, Dr. Reddys Laboratories Limited, Hyderabad, India.

9:50 a.m.–10:10 a.m.

**CS-126-5 Lab Animal Allergens, One Company's Approach in Preventing Exposures.** M. Laemmerhirt, R. Pasquino, Sanofi, Bridgewater, NJ; B. Weeks, Sanofi Pasteur, Cambridge, MA.

10:10 a.m.–10:30 a.m.

**SR-126-6 Risk Assessment for Exposures to Ambient Inorganic Airborne Arsenic in Shymkent, Kazakhstan.** A. Korchevskiy, J. Rasmuson, E. Rasmuson, R. Strode, D. Hall, D. Larson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; R. Olsen, CDM, Inc., Denver, CO.

10:30 a.m.–10:50 a.m.

**CS-126-7 Commercial and Military Fuel and Alternatives Guidelines.** P. Lurker, J. Hinz, U.S. Air Force, Wright-Patterson AFB, OH.

## RT 238

**Global Professional Ethics Roundtable Discussion**

8:30 a.m.–11:00 a.m. » ICC, 127

**Arranger and Moderator:** N. McClellan, Business Health Systems, Inc., Port Barrington, IL. **Monitors:** J. Throckmorton, University of Utah, Salt Lake City, UT; N. Rice, Intermountain Healthcare, Salt Lake City, UT.

The industrial hygiene profession has become global for a high percentage of practicing professionals. Those professionals who are part of multinational corporations and global consultancies are confronted

with issues that include responsibility for the health and safety of local suppliers in developing nations, advances in standards and their relative comparison to the U.S. and EU, and what roles developed nations should play in enforcement of those standards. A panel representing all sectors of the profession will discuss these issues and allow discussion with participants interested in responding to the topics addressed.

- J. Singh, Golder Associates, Inc., Kamuela, HI.
- K. Nivens, Shell International B.V., The Hague, Netherlands.
- E. Medina, Alliance Consulting International, San Diego, CA.
- L. Parker, Bureau Veritas, Novi, MI.
- M. Levitsky, ECHO Management, Chair of AIHA Workplace Health Without Borders, Mississauga, ON, Canada.

## RT 239

**Innovative Hearing Conservation — Preventing Noise-Induced HL in “Kids” of All Ages**

8:30 a.m.–11:00 a.m. » ICC, Wabash 2

**Arranger and Moderator:** E. Berger, 3M, Indianapolis, IN. **Monitors:** K. Wetzel, Eli Lilly, Indianapolis, IN; J. Cissna, Portland General Electric, Portland, OR.

Workers with noise-induced hearing loss will frequently express “I wish I had been told about preventing this when I was young,” when their risky listening behaviors were forged. Our youth are at risk of developing noise-induced hearing loss and tinnitus from a young age, similar to their working parents. The Dangerous Decibels program was developed to reduce the incidence of noise induced hearing loss and tinnitus by changing knowledge, attitudes, and behaviors about hazardous sound exposure. Implementing this innovative educational program in local workplaces and communities will positively influence children, equip them with practical preventive strategies, and actively engage their working parents. This roundtable will familiarize the attendee with the Dangerous Decibels program and enthusiastically explore the potential benefits and realities of engaging the families of workers and the local community in hearing loss prevention outreach. Hands-on activities will be utilized to demonstrate the novel training techniques that can be implemented in occupational and/or community-based settings. If you are a “kid at heart,” you won’t want to miss this one.

- **The Essential Nature of Sound.** E. Berger, 3M, Indianapolis, IN.
- **Novel Approaches to Hearing Education.** D. Meinke, University of Northern Colorado, Greeley, CO.
- **Dangerous Decibels — A Fun and Interactive Program for All Ages.** W. Martin, Oregon Health Sciences University, Portland, OR.
- **From the Workshop into the Classroom — Let the Fun Begin!** T. Madison, 3M, St. Paul, MN.

## PO 127

**Management and Communication in OSH**

8:30 a.m.–11:10 a.m. » ICC, Wabash 1

**Arrangers:** S. Skipper, EnSafe Inc., Knoxville, TN; J. Zey, University of Central Missouri, Warrensburg, MO. **Moderator:** S. Skipper, EnSafe Inc., Knoxville, TN. **Monitors:** J. Zey, University of Central Missouri, Warrensburg, MO; R. Goodman, EnSafe Inc., Cincinnati, OH.

8:30 a.m.–8:50 a.m.

**CS-127-1 Developing and Implementing an Occupational Health and Safety Management System: Finding the Right Approach for a Small Business.** A. Haugh, A. Korchevskiy, E. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

8:50 a.m.–9:10 a.m.

**CS-127-2 Partnering for Success: A Strategy.** F. Arreola, T. Robbins, Abbott Laboratories, Abbott Park, IL.

9:10 a.m.–9:30 a.m.

**CS-127-3 Incident Analysis and Root Cause: Integrating a Quality 8-D Process.** P. Esposito, ESIS, Annapolis, MD.

9:30 a.m.–9:50 a.m.

**CS-127-4 Safety Through Accountability and Recognition: Achieving a World-Class Culture and Exceptional Safety Performance.** P. Esposito, ESIS, Annapolis, MD.

9:50 a.m.–10:10 a.m.

**CS-127-5 Implementation of a Chemical Exposure Assessment Program.** R. Smith, EaglePicher Tech., Joplin, MO.

10:10 a.m.–10:30 a.m.

**CS-127-6 WITHDRAWN Ionizing Radiation: A Working Checklist for OSH Professionals.** J. Rider, Noblesville, IN.

10:30 a.m.–10:50 a.m.

**SR-127-7 Urine Color Is an Effective Biomarker for Self-Monitoring Hydration Status in Army Cadets from the United Arab Emirates.** T. Loney, United Arab Emirates University, Al Ain, United Arab Emirates; J. Carter, L. Scullion, G. Nicholson, Optimal Performance Limited, Bristol, United Kingdom; M. Al Shehhi, United Arab Emirates Armed Forces, Abu Dhabi, United Arab Emirates.

10:50 a.m.–11:10 a.m.

**CS-127-8 The Business Case for Occupational and Environmental Health and Safety (OEHS) Sustainability.** B. Fontaine, Windsor Consulting Group, Inc., South River, NJ.

## CR 333

**Taking Process Safety and Catastrophic Event Prevention to the Next Level**

10:00 a.m.–11:00 a.m. » ICC, 102

**Presenter:** S. Stricoff, BST, Ojai, CA.

For more than 20 years, the concepts of PSM have been in use in industries with catastrophic event

potential, yet these events continue to occur. This presentation compares the approach embodied in PSM with the more comprehensive approach required to address the impact of organizational culture, leadership, and HR systems on catastrophic event prevention. The seven specific areas most frequently overlooked in prevention of catastrophic events are described, creating a blueprint for taking catastrophic event prevention to the next level.

### Herbert E. Stokinger Award Lecture

#### So You Think That You Can ... Set Threshold Limit Values?



Noon-1:00 p.m. » ICC, Wabash 1

**Presenter:** Michelle M. Schaper, PhD, Toxicologist, U.S. Department of Labor, Mine Safety and Health Administration, Washington, DC.

The first book of TLVs® was published by ACGIH® in 1961. These TLVs®

evolved from a list of approximately 135 Maximum Allowable Concentrations (MACs) of Air Contaminants for 1946. In 1961, there were approximately 250 chemical substances for which TLVs® were developed. They were defined as airborne concentrations that "represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect." Those TLVs® were generally applied to a workforce of *normal, healthy, adult males*. Today, there are approximately 850 chemical substances for which TLVs® have been developed. Over the years, 'Notations' (e.g., SKIN, SEN, A1...5) have been added that remind EHS professionals of special concerns related to a chemical substance. *Documentation*, which may be extensive, is provided for each chemical substance so that EHS professionals can understand the basis of each TLV®. Although the 2012 definition of the TLVs® still includes the language "nearly all workers may be repeatedly exposed," today's workforce is diverse in terms of age, gender, ethnicity, wellness, physical limitations, and other factors. Dr. Schaper's presentation will review changes in the TLVs® (e.g., numerical values, endpoints of toxicity such as irritation), and in the characteristics of the workers the TLVs® are intended to protect. It is not an easy task to set TLVs® or other occupational exposure limits (OELs). ACGIH® and others who are involved in the

development of such limits have been criticized and legally challenged. Dr. Stokinger once wrote about sanity in research and evaluation of environmental health. Perhaps it is time for a reality check on why occupational exposure limits are set in the first place. Our mission has been and remains the protection of workers. Dr. Schaper will discuss the importance of developing, updating, and using current OELs and ensuring that proper training of our workers is being done to fulfill our mission.

### CR 334

#### Understanding Corporate Social Responsibility: New Opportunities for EHS Professionals

1:00 p.m.-2:00 p.m. » ICC, 102

**Presenters:** K. Nobrega, Specialty Technical Consultants, Amherst, MA; S. Broadbent, Specialty Technical Consultants, Oakland, CA. **Monitor:** P. Georgieva, University of Central Missouri, Warrensburg, MO.

The growing importance of corporate social responsibility (CSR) and increasing demands for organizational transparency and accountability have created new pressures and opportunities for industrial hygienists and environmental, health, and safety (EHS) professionals. We explore how to develop and promote CSR programs and overcome common barriers to implementation. With case studies across numerous industries, we show how CSR programs benefit the stakeholders they impact. We share personal stories of EHS professionals who have transitioned into CSR roles.

### PO 128

#### Sampling and Analysis: Current Trends in Workplace Exposure Assessments

1:00 p.m.-4:00 p.m. » ICC, Wabash 3

**Arranger:** S. VanEtten, EMSL Analytical, Cinnaminson, NJ. **Moderator:** A. Iske, University of Central Missouri, Kansas City, MO. **Monitors:** D. Pastuf, Galson Laboratories, East Syracuse, NY; J. Cooper, Bureau Veritas North America, Novi, MI.

1:00 p.m.-1:20 p.m.

**SR-128-1 The Effect of Concentration, Sorbent Weight, and Adsorbate on the Adsorption Capacity of a Novel Fluidized Air Sampling Media Utilizing a Sparging System to Generate VOCs at Different Levels.** A. Alarfaj, Saudi Aramco, Dhahran, Saudi Arabia.

1:20 p.m.-1:40 p.m.

**CS-128-2 Police Exposures to Drugs While Working Inside an Evidence Vault.** K. Fent, S. Durgam, NIOSH, Cincinnati, OH.

1:40 p.m.-2:00 p.m.

**SR-128-3 Development of a Novel Porous Membrane Denuder.** L. Shou, A. Theodore, C. Wu, University of Florida, Gainesville, FL; B. Birky, Florida Industrial and Phosphate Research Institute, Bartow, FL.

2:00 p.m.-2:20 p.m.

**SR-128-4 A Novel Desorption Technique for Volatile Organic Compounds – Comparison Between Activated Carbon and Carbon Nanotubes.**

E. Floyd, C. Lungu, University of Alabama, Birmingham, AL.

2:20 p.m.-2:40 p.m.

**SR-128-5 Determining Indoor Airborne Synthetic Musks by Using Polyurethane Foams (PUF) with the Analysis of Triple Quadrupole GC/MS/MS.**

I. Wang, S. Tsai, National Taiwan University, Taipei City, Taiwan.

2:40 p.m.-3:00 p.m.

**SR-128-6 Determinations of Airborne 1,4-Dioxane in Occupational Settings in Taiwan.** H. Lu, S. Tsai, National Taiwan University, Taipei, Taiwan; S. Cheng, Institute of Occupational Safety and Health, Executive Yuan, Taipei, Taiwan.

3:00 p.m.-3:20 p.m.

**SR-128-7 Effects of Glove Material on Permeation by a Solvent Mixture Commonly Used in Auto Painting.** J. Tran, D. Ceballos, R. Dills, M. Yost, M. Morgan, University of Washington, Seattle, WA.

3:20 p.m.-3:40 p.m.

**SR-128-8 Comparison of Asbestos Analytical Methods.** J. Thornburg, O. Crankshaw, RTI International, Research Triangle Park, NC; J. Kominsky, Environmental Quality Management, Inc., Cincinnati, OH; W. Barrett, U.S. EPA, Cincinnati, OH; J. Konz, U.S. EPA, Washington, DC.

3:40 p.m.-4:00 p.m.

**SR-128-9 Sampling and Analysis of the Specific Aeroallergen Proteins Tropomyosin and Arginine Kinase in Snow Crab and Northern Shrimp Plants Located in the Province of Québec.** S. Gagne, IRSST, Montreal, QC, Canada; A. Abdel Rahman, Samuel Lunenfeld Research Institute, Toronto, ON, Canada; R. Helleur, Memorial University of Newfoundland, St. John's, NL, Canada.

**!** The viewpoints, opinions and conclusions expressed in the presentations, sessions and discussions at AIHce have not necessarily been approved or endorsed by AIHA® or ACGIH® and do not necessarily reflect those of AIHA® or ACGIH®.



SS 004

## Assessing Exposure During Disaster Response: The Gulf Oil Spill Experience

1:00 p.m.–4:00 p.m. » ICC, Wabash 2

**Arranger:** D. Hollins, ChemRisk, LLC, San Francisco, CA. **Moderator:** M. Sandy, Lockheed Martin Corporation, Orlando, FL. **Monitors:** M. Grespin, W. Cyr, ChemRisk, LLC, San Francisco, CA.

The Deepwater Horizon oil spill is believed to have released nearly five million barrels of oil, constituting the largest accidental oil spill in marine waters to date. Oil was first observed on the water's surface on April 22, 2010, following the April 20, 2010 explosion and subsequent sinking of the Deepwater Horizon drilling unit. The oil leak continued until being capped on July 15, 2010. During and after the leak, thousands of workers and residents involved in cleanup efforts were exposed to oil and/or dispersant products. The National Institute of Environmental Health Sciences (NIEHS) has launched a multi-year study to investigate the potential health effects from the oil spill in the Gulf region. The study is focused on workers' exposures and potential health outcomes such as respiratory, neurobehavioral, carcinogenic, and immunological effects. The study is also expected to evaluate mental health concerns and other oil spill-related stressors such as job loss, family disruption, and financial uncertainties. This symposium provides an overview of the exposure assessment strategies, an analysis of analytical direct reading instruments and an analysis of exposure data collected to date.

- **NIEHS Gulf STUDY – Study Overview and the Exposure Assessment Process.** P. Stewart, Stewart Exposure Assessments, LLC, Arlington, VA.
- **NIEHS Gulf STUDY – Exposure Assessment Techniques and Preliminary Findings.** M. Stenzel, Exposure Assessment Applications, LLC, Arlington, VA.
- **BP's Response to the Gulf Oil Spill.** C. Metzler, BP, Houston, TX.
- **Direct Reading Instruments and the Gulf Oil Spill: Understanding the Strengths/Limitations When Analyzing the Data.** C. Millner, Center for Toxicology and Environmental Health, LLC, North Little Rock, AR.
- **Analysis and Modeling of Airborne BTEX Concentrations from the Deepwater Horizon Oil Spill.** H. Avers, ChemRisk, LLC, Boulder, CO.

! AIHce cannot guarantee the appearance of all presenters listed in this program. We regret any disappointment if a particular speaker is unable to present.

PO 129

## Biological Monitoring and Aerosols

1:00 p.m.–4:00 p.m. » ICC, 125

**Arranger and Moderator:** D. Napier, DNA Industrial Hygiene, Manhattan Beach, CA. **Monitors:** C. Boraiko, Middle Tennessee State University, Murfreesboro, TN; C. Estill, NIOSH, Cincinnati, OH.

1:00 p.m.–1:20 p.m.

**SR-129-10 Science-Based Policy and Practice to Prevent Lead Poisoning of Children in Former Soviet States.** A. Korchevskiy, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

**SR-129-1 WITHDRAWN Real-Time Biomonitoring of Exposure to Carbon Monoxide.** P. Sébastien, Saint-Gobain, Cavaillon, France.

1:20 p.m.–1:40 p.m.

**SR-129-2 Biological Availability of Chromium VI in Welding, Plating, and Spray Painting, Assessed Using Chromium in Urine.** M. Morgan, D. Parette, T. Carter, J. Wagner, J. Walters, R. Dills, University of Washington, Seattle, WA.

1:40 p.m.–2:00 p.m.

**SR-129-3 Arsenic Exposure and Water Supply Measures in the Eastern Kentucky Coalfields.** N. Johnson, J. Unrine, University of Kentucky, Lexington, KY; J. Dinger, A. Fogle, D. Carey, Kentucky Geological Survey, Lexington, KY; J. Shelton, Kentucky Cancer Registry, Lexington, KY.

2:00 p.m.–2:20 p.m.

**SR-129-4 WITHDRAWN Regular Biomonitoring of Lead Exposures.** P. Sébastien, Saint-Gobain, Cavaillon, France.

2:20 p.m.–2:40 p.m.

**SR-129-5 A Proposed Biological Environmental Exposure Level (BEEL) for 1-Butoxy-2-propanol.** S. Que Hee, University of California, Los Angeles, CA.

2:40 p.m.–3:00 p.m.

**SR-129-6 Research on Radioactivity and Cytotoxicity of Emission Aerosol During Casting Process.** C. Lai, C. Chung, D. Lu, L. Hsu, Chung Shan Medical University, Taichung, Taiwan; F. Tang, Changhua Christian Hospital, Changhua County, Taiwan; J. Wang, Atomic Energy Council, Taoyuan County, Taiwan.

3:00 p.m.–3:20 p.m.

**SR-129-7 Development of Silica Precursor Technology on Reducing Welding Fume Toxicity.** J. Wang, J. Guan, M. Kalivoda, A. Theodore, J. Sharby, C. Wu, University of Florida, Gainesville, FL; K. Paulson, Naval Facilities Engineering Command (NAVFAC), Port Hueneme, CA.

3:20 p.m.–3:40 p.m.

**SR-129-8 Characterization of Composite Particles Containing Carbon Nanotubes by Scanning Transmission Electron Microscopy.** L. Cena, NIOSH, Morgantown, WV; T. Peters, The University of Iowa, Iowa City, IA; T. Lersch, G. Casuccio, RJ Lee Group, Monroeville, PA.

3:40 p.m.–4:00 p.m.

**SR-129-9 Development of Semiempirical Relationship Between Fume Exposure and Welding-Related Parameters Using Fractional Factorial Design.** A. Abelmann, ChemRisk, LLC, Chicago, IL; J. Breskey, California State University, Fullerton, CA; S. Erdal, University of Illinois at Chicago, Chicago, IL.

RT 240

## Radiation Emergency Response and Annual Memorial Tribute to Dr. Herman Cember

1:00p.m.–4:30 p.m. » ICC, 120

**Arranger:** R. Johnson, Radiation Safety Counseling Institute, Rockville, MD. **Moderator:** C. Gregory, Baxter Healthcare Corporation, Deerfield, IL. **Monitors:** C. Marlowe, Camp Dresser McKee, Scotch Plains, NJ; R. Gallagher, Applied Health Physics, Inc., Dagsboro, DE.

Agencies at all levels have committed substantial resources since 9/11 to prepare for response to radiation incidents. Industrial hygienists need to be prepared for incident response at their own facility or to assist responders for other incidents. In particular, IHS who serve as RSOs may have radiation equipment and expertise that could be a valuable resource for response to radiation emergencies. RSOs may have to deal with local incidents, such as a radioactive material spill, a lost or damaged source, or larger events such as a damaged nuclear reactor or explosion of a bomb containing radioactive material. This roundtable will include a panel of six CHPs and CIHs with over 100 years of experience in radiation emergency response. Each panel member will make a short presentation in the area of their technical experience, and then the panel will be open for audience questions about radiation emergencies. This roundtable will also include the second annual memorial lecture to honor Dr. Herman Cember for his 60-year career in teaching industrial hygienists and others for a better understanding of radiation.

- **A Memorial Tribute to Dr. Herman Cember – How to Deal with Contaminated Livestock and Animal Triage Following a Radiological Event Such as the Fukushima Reactors.** T. Johnson, Colorado State University, Fort Collins, CO.
- **Fukushima – A Year Later.** S. Bump, Dade Moeller & Associates, Inc., Richland, WA.
- **Risk Communication During Radiation Emergencies – Fears May Overtake Reality.** R. Johnson, Radiation Safety Counseling Institute, Rockville, MD.

- **Transitioning from Safety Risk Assessments to Health Risk Assessments in Radiological Emergencies.** E. Daxon, Batelle, San Antonio, TX.
- **Radiation Emergency Response Instrumentation.** J. Kenoyer, Dade Moeller & Associates, Inc., Aiken, SC.
- **Observed Techniques, Planning, and Lessons Learned from Radiation Contamination on a Ship from Japan.** C. Gagnon, U.S. Coast Guard, Novato, CA.

## RT 241

### Honing Your Competitive Edge in the Battle for the Bucks

1:00 p.m.–5:00 p.m. » ICC, 127

**Arranger and Moderator:** D. Heidel, NIOSH, Cincinnati, OH. **Monitors:** J. Zey, University of Central Missouri, Warrensburg, MO; T. Lentz, NIOSH, Cincinnati, OH.

Is your H&S budget cut to the bone? Are your projects to reduce risks stalled due to cost constraints? Does your organization view your contributions as less than “value added”? Does your chief financial officer avoid your phone calls? You’re not alone. Competing for limited resources in the current economic environment requires that you become comfortable discussing the business value of your planned H&S interventions. Understanding and using the process

for demonstrating how your H&S risk reduction goals can support the achievement of your organization’s business goals are essential skills for the H&S professional, but they are skills that most of us did not learn in college. And, let’s face it, finance professionals talk a language that is more than a bit intimidating! This roundtable will take the mystery out of developing effective business cases by demonstrating the “value strategy” steps through case studies completed by H&S professionals.

- **The Value of Safety to the CEO.** D. Eherts, Sikorsky Aircraft Corporation, Stamford, CT.
- **Using the Value Strategy Tools for EHS Strategic Planning.** D. Downs, EHS Management Partners, LLC, Shorewood, MN.
- **Finance “101.”** E. Biddle, NIOSH, Morgantown, WV.
- **Using the Value Proposition to Gain Acceptance for Enhanced Exposure Control.** B. Bethel, Sikorsky Aircraft Corporation, Stamford, CT.
- **EHS Value Strategy: A Path to Sustainability.** G. Popov, University of Central Missouri, Warrensburg, MO.
- **Building a Business Case for Safe Patient Handling Program Implementation Throughout the Army Medical Command.** M. Callison, U.S. Army, Aberdeen Proving Ground, MD.
- **Do I Really Have to Use the Entire AIHA Value Strategy to Prove My Case?** E. Biddle, NIOSH, Morgantown, WV.

## CR 335

### Enhancing Chemical Management within the Framework of Existing TSCA Regulations

2:30 p.m.–3:30 p.m. » ICC, 102

**Presenter:** K. Blake, 3E Company, San Diego, CA.

In this session, the speaker will navigate through the different components of TSCA while providing insight into the following topics: History of TSCA; Scope and Sections, including new CDR rules; Importing and Exporting Requirements; Impact on TSCA and TSCA Reform on Businesses; p.m.N Submissions; Latest developments – changes and new programs.



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## Expo, Hall B

Posters are grouped by topic and authors are stationed at their posters at designated times to answer questions. It's a great spot on the Expo floor to meet colleagues and to discuss the latest research in OEHS!

All posters are open for viewing 9:00 a.m. Monday, June 18 through 1:00 p.m. Wednesday, June 20.

## Poster Session Arrangers

- Chad Dowell, NIOSH, Cincinnati, OH.
- Aleks Stefaniak, NIOSH, Morgantown, WV.
- R. Kent Oestenstad, University of Alabama, Birmingham, AL (Students).
- Lorraine Conroy, University of Illinois at Chicago, Chicago, IL (Students).
- Jim McGlothlin, Purdue University, West Lafayette, IN (Students).

## Poster Session 401

Author Attend Time: Monday, June 18, 10:00 a.m.–Noon

### Communication & Training

- **CS-401-01 Latino Worker Safety and Health on West-Wisconsin Dairy Farms.** B. Beamer, University of Wisconsin-Stout, Menomonie, WI; M. Bauer, OSHA, Eau Claire, WI.
- **CS-401-02 Control of Airborne and Skin-borne Methanol Exposures During Manual Optical Filter Cleaning – A Case Study.** D. Weber, Liberty Mutual Insurance, Glastonbury, CT.

### Computer Applications

- **CS-401-03 Shell's Global Deployment of a Risk-based Health Management.** P. Owens, Shell, Martinez, CA.

### Green Building and LEED

- **CS-401-04 Performance of Industrial Hygiene Site Monitoring Efforts for LEED Pre-Occupancy Testing for New School Construction Along with Sampling and Laboratory Analytical Challenges Related to Data Presentation and Interpretation Including Lessons Learned.** J. Koehn, Jan Koehn, M.S., CIH, Inc., Houston, TX; H. Dotiwala, Enviro-Tas, Inc., Houston, TX.
- **CS-401-05 Foam Insulation – IAQ Complaints and Impact on VOCs for LEED Evaluations.** J. Kenny, ESIS Environmental Health Lab, Cromwell, CT.

### Occupational & Environmental Epidemiology

- **SR-401-06 Occupational Health Surveillance Program for Swine Workers.** S. Kirychuk, A. Owusu-Kyem, P. Pahwa, C. Karunanayake, N. Koehncke, D. Rennie, University of Saskatchewan, Saskatoon, SK, Canada.

### Risk Assessment & Management

- **SR-401-07 Quantitative Model Evaluation: Lessons Learned from “Getting the Predictions Right”.** P. Williams, E Risk Sciences, LLP, Boulder, CO; K. von Stackelberg, E Risk Sciences, LLP, Boston, MA.
- **CS-401-08 Value (Cost Effectiveness) of EH&S Investments.** E. Reed, Liberty Mutual Insurance Co, Centennial, CO; J. Lieberman, Environmental Information Services, Inc., Boulder, CO.
- **CS-401-09 Characterizing the Impacts of Uncertainty and Scientific Judgment in Exposure Limit Development.** A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH; R. Sussman, SafeBridge Consultants, Inc., New York, NY; B. Naumann, Merck & Co., Whitehouse Station, NJ; R. Roy, 3M, Saint Paul, MN.

### Safety

- **CS-401-10 Determination of Potential Asbestos Exposure at POSCO Steel Work.** Y. Sung, RIST, Kwang-Yang, Republic of Korea; K. Kim, K. Jang, POSCO, Kwang-Yang, Republic of Korea.
- **SR-401-11 Evaluation of a Risk Management Approach to Safety Program Improvement in the Mining Industry.** M. Griffin, University of Arizona, Tucson, AZ.
- **SR-401-12 The HSWI: Health and Safety Workplace Index – A New Method for Managing the Residual Risk in Oil and Gas Plants.** M. Buonanno, Golder Associates, Turin, Italy; P. Pavanelli, OIRM S.A., Turin, Italy; N. Pampols, Studio Buonanno S.R.L., Turin, Italy.

## Poster Session 402

Author Attend Time: Monday, June 18, 2:00 p.m.–4:00 p.m.

### Aerosols

- **SR-402-01 Impact of Apparent Density and Moisture Absorption Rate on Airborne Emission of Nanopowders.** S. Lee, W. Ko, Feng Chia University, Taichung City, Taiwan.
- **SR-402-02 Penetration of Charged Particles through Metallic Tubes.** K. Chang, S. Huang, C. Chen, National Taiwan University, Taipei, Taiwan; C. Chen, Institute of Occupational Safety and Health, Taipei, Taiwan; Y. Chen, Chang Jung Christian University, Tainan, Taiwan.
- **SR-402-03 Characterization of a Vibrating Mesh Aerosol Generator.** W. Chan, S. Huang, Y. Kuo, C. Chen, National Taiwan University, Taipei, Taiwan.
- **SR-402-04 Fine Particle Exposures During Vehicle Fire Suppression: Mobile Direct Reading Sampling.** D. Evans, NIOSH, Cincinnati, OH.

### Environmental Issues

- **SR-402-05 The Environmental Fate of Polybrominated Diphenyl Ethers in Taiwan – The Application of a Food Web Model.** S. Tsai, L. Lin, I. Wang, W. Lin, H. Lu, H. Liu, National Taiwan University, Taipei, Taiwan.

### Exposure Assessment Strategies

- **CS-402-06 ~~WITHDRAWN~~: Case Studies Assessing Worker and Community Exposures to Toxic Substances in Developing Countries.** A. Sussell, NIOSH, Cincinnati, OH.
- **CS-402-07 Exposure Assessment at an Electrolytic Manganese Dioxide Processing Plant.** S. Durgam, NIOSH, Cincinnati, OH.
- **CS-402-08 Pill Dust Exposures at a Mail Order Pharmacy.** K. Fent, S. Durgam, NIOSH, Cincinnati, OH.
- **SR-402-09 Exposure to o-Toluidine, Aniline, and Nitrobenzene in a Rubber Chemicals Manufacturing Plant: A Retrospective Exposure Assessment Update.** K. Hanley, M. Hein, T. Carreon, A. Ruder, NIOSH, Cincinnati, OH; S. Viet, Westat, Rockville, MD.
- **CS-402-10 Design and Conduct of an Industrial Hygiene Field Site Monitoring Strategy for Onshore Oil and Gas Operations Including Oilfield Services to Document the Potential for Occupational Exposures to Chemical and Physical Hazards as well as Other Site Hazard Surveys.** J. Koehn, L. McKelvey, Jan Koehn, M.S., CIH, Inc., Houston, TX; E. Salazar-Vega, University of Texas, Houston, TX.
- **SR-402-11 Application of Bayesian Decision Analysis to Determine the Modified Exposure Profile and the Priority of Nationwide High Risk Enterprises.** S. Wang, P. Tsai, China Medical University, Taichung, Taiwan.
- **CS-402-12 Development of a Sampling Based, Refractory Ceramic Fiber Exposure Assessment Program for Optical Mirror Manufacturing.** J. Piakis, University of Arizona, Tucson, AZ.
- **SR-402-13 Analysis of Time Weighted Average Concentrations of Formaldehyde During Keratin Hair Smoothing Treatments.** L. Spicer, J. Pierce, A. Abelman, R. Adams, B. Finley, S. Gaffney, ChemRisk, Chicago, IL.
- **SR-402-14 Usefulness of Vapor Pressure for Control Banding in the Semiconductor Workplaces.** D. Lim, K. Kim, S. Kim, Samsung Electronics, Gyeonggi-Do, Republic of Korea.

## Poster Session 403

Author Attend Time: Tuesday, June 19, 10:00 a.m.–Noon

### Biological Monitoring

- **~~WITHDRAWN~~: SR-403-01 Excretion of Urinary Metabolites in Workers Exposed to Airborne Ethylbenzene.** J. Roh, J. Yeo, C. Kim, J. Won, I. Jung, Yonsei University, Seoul, Republic of Korea.

### Biosafety and Environmental Microbiology

- **SR-403-02 The Study of Bioaerosol Characteristics in a Wood Processing Plant.** C. Lai, Y. Liu, Y. Chen, Y. Zhang, Y. Lin, Chung Shan Medical University, Taichung, Taiwan.



## Ionizing Radiation

- **CS-403-03 X-ray Exposure in the Orthopedic and Neurosurgical Operation Theatre.** Z. Kotwica, Westpomorian Regional Hospital, Gryfice, Poland; M. Kotwica, Institution of Occupational Health, Lodz, Poland.

## Laboratories, Analytical & Research

- **SR-403-04 New Sampling Concept and Novel Construction of Grab-Sampling Bags.** G. Mihaylov, B. Truex, Nextteq LLC, Tampa, FL.

## Nonionizing Radiation

- **CS-403-05 ~~WITHDRAWN~~: Radiation Exposure from IT Labs — Should it Concern Us?** Y. Yu, DSM, Shanghai, China.

## Sampling and Laboratory Analysis

- **SR-403-06 Immunodetection of (1-3)- $\beta$ -d-glucan Particles Using the Halogen Immunoassay.** F. Rivera-Mariani, A. Rule, P. Breyse, Johns Hopkins University, MD.
- **CS-403-07 Heavy Metal Contamination Analysis of Soils, Sediments and Fluids with Field Portable XRF.** K. Russell, M. Jennings, S. Moller, Olympus Innov-X, Woburn, MA.
- **SR-403-08 Assessing Exposures to 1-Chloro-4-(Trifluoromethyl) Benzene (PCBTf).** M. Harper, B. Lewis, D. Burns, J. Wells, J. Ham, S. Kim, NIOSH, Morgantown, WV.
- **SR-403-09 Recommendations for Kaolin Interference Correction to Quartz Measurement in Coal Mine Dust.** T. Lee, W. Chisholm, M. Kashon, M. Harper, NIOSH, Morgantown, WV.
- **SR-403-10 Pump Pulsation at the Inlet of Respirable Cyclones.** E. Lee, L. Lee, M. Harper, NIOSH, Morgantown, WV.

- **SR-403-11 Phase Distributions of Chlorpyrifos During Greenhouse Applications.** S. Kim, E. Lee, T. Lee, M. Harper, NIOSH, Morgantown, WV.
- **~~WITHDRAWN~~: SR-403-12 Correcting the Gas/particle Partitioning of Pcd/ffs in the Flue Gas Collected from an Iron Ore Sinter Plant.** Y. Kuo, Y. Chen, J. Yang, P. Tsai, National Cheng Kung University, Tainan, Taiwan; L. Wang, G. Chang-Chien, Cheng Shiu University, Kaohsiung, Taiwan.

## Poster Session 404

**Author Attend Time: Tuesday, June 19, 1:00 p.m.–3:00 p.m.**

### Health Care Sites/Industry

- **CS-404-01 Creation of a Series of Home Health-care Workers Fast Fact Cards.** L. Hodson, NIOSH, Cincinnati, OH.

### Indoor Environmental Quality

- **SR-404-02 Characterization of Airborne Materials Released from a Laser Printer with and without a HEPA Filter.** S. Seo, Y. Cho, M. Kim, J. Choi, Korea University, Seoul, Republic of Korea; D. Kim, Institute of Technology for Environmental Health and Safety, Seoul, Republic of Korea.
- **CS-404-03 Reduction of Excessive Formaldehyde Levels in Residential Construction through Engineering Controls.** M. Heaney, Liberty Mutual, Amherst, NH.
- **SR-404-04 Distribution Characteristics of Airborne Bacteria in Pig Buildings.** K. Kim, Catholic University of Pusan, Pusan, Republic of Korea; Y. Roh, Simon Fraser University, Vancouver, BC, Canada; C. Kim, Yonsei University, Seoul, Republic of Korea; D. Kim, Seoul National University of Technology, Seoul, Republic of Korea.

## Industrial Hygiene General Practice

- **CS-404-05 Legionnaires' Disease in Workers at an Automobile Shredding Facility.** R. Boylstein, R. Bailey, C. Piacitelli, C. Schuler, J. Cox-Ganser, K. Kreiss, NIOSH, Morgantown, WV.
- **CS-404-06 Carbon Dioxide Exposures at Meat Batching Operations.** M. Wiggins, Liberty Mutual Group, Lexington, SC.
- **CS-404-07 Hexavalent Chromium Exposure Control During Hard Facing.** G. Robinson, Liberty Mutual, Loves Park, IL.
- **SR-404-08 Health and Safety in Small Auto Collision Repair Shops — Outcomes of a 1-year Intervention.** A. Bejan, D. Parker, M. Skan, Park Nicollet Institute, St. Louis Park, MN; L. Brosseau, University of Minnesota, Minneapolis, MN.
- **CS-404-09 Selecting that New Industrial Hygiene and Safety Inspection Instrument.** M. Stevens, Cincinnati Technical Center, Cincinnati, OH.
- **CS-404-10 Hexavalent Chromium Surface Contamination from Stainless Steel Welding Activities.** R. Claiborne, Zurich Services Corp., Charlotte, NC.

## Protective Clothing and Equipment

- **SR-404-11 A Passive Method for Measuring Particle Penetration Through Protective Clothing Materials.** P. Gao, T. Rozzi, NIOSH, Pittsburgh, PA; P. Jaques, URS Corporation, Pittsburgh, PA.

## Poster Session 405 Graduate and Undergraduate Students

**Author Attend Time: Wednesday, June 20, 10:00 a.m.–Noon**

Graduate and undergraduate students present to discuss research and answer questions.



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## Indiana Convention Center Halls A-E

### Hours

Monday, June 18, 9:00 a.m.–5:30 p.m.  
Tuesday, June 19, 9:00 a.m.–3:00 p.m.  
Wednesday, June 20, 9:00 a.m.–1:30 p.m.

**Expo Opening Cocktail Reception** on Monday from 4:00 p.m.–5:30 p.m. Remember to bring your complimentary drink ticket.

**Tuesday Lunch in the Expo** — Full registrants received a coupon for lunch valid at any one of the various concessions in the Convention Center.

## Passport to Prizes Prize Booth 136

Have your passport stamped by participating exhibitors and drop your entry at Prize Booth 136 by Noon on Wednesday. Winning names will be drawn at 12:30 p.m. The Grand Prize is a trip to AIHce 2013 in Montreal, Quebec. 2nd Prize is \$1,000.

## NEW! Text to Win an iPad! Four Chances to Win!

Find the four Text-to-Win stations in the Expo. At each location, text the word on the sign to 68398. You can only enter once at each location, but by visiting all four locations, you'll increase your chances of winning. Only one iPad per person. Winners will be notified by text Tuesday evening, and you'll take your iPad home with you.

*(The fine print — Msg&Data rates may apply. You will receive one confirmation text message for each text sent; each winner will receive one text. Text numbers will not be saved or used again. To opt out, text STOP to 68398. Only one entry per mobile phone, per location.)*

## Special Exhibits Clandestine Drug Lab Exhibit Booth 1225



AIHA's Clandestine Laboratory Working Group has developed a mock clandestine drug lab display that focuses on hazards associated with the production of methamphetamine and indoor marijuana grow operations. Representatives from Indiana State

Police Methamphetamine Suppression Section and the DEA Springfield, Illinois office will be on hand to demonstrate how they approach, monitor, and mitigate health hazards associated with clandestine drugs. In addition, Indiana State Police will be giving a 90-minute presentation on Methamphetamine Lab Recognition and Safety on Tuesday from 1:00 p.m.–2:30 p.m. in the Expo Theater.

## The Hope Quilt, Booth 149

### Presentation:

Monday, 1:00 p.m.–1:20 p.m.

**Pamela Vossen, MPH, Workplace Safety & Health Coordinator/Staff Epidemiologist, UNITE HERE! International Union, New York, NY**



For generations, quilting has represented an important tradition that has enabled women to build community, turn discarded scraps of fabric into something useful and create something that, when joined together, is bigger and more beautiful than the sum of its parts.

In keeping with this tradition, the Hope Quilt stitches together the stories of hotel housekeepers and the pain they endure everyday just to provide for their families. Housekeepers throughout North America have contributed patches to the quilt, which now stretches nearly 200 feet.

With each patch symbolizing a story of pain or injury brought on by the heavy burden of their jobs, this quilt is a testament to the work of housekeepers and their worth as human beings. It is a symbol that together, they can turn their stories of pain into a source of strength, and empower each other in their journey for simple, safe solutions to housekeeping hazards.

The Hope Quilt illustrates a need for simple remedies such as fitted sheets, mops, long-handled tools, and a health and safety standard for hotel housekeeping to enforce safe working rules. Some of these are solutions recommended this past year by CalOSHA in response to complaints filed by Hyatt housekeepers about repetitive motion injuries — the very injuries depicted in the Hope Quilt.

*The Quilt will be displayed daily until 1:00 p.m. on Wednesday.*

## Expo Theater: Product Demos and Presentations

### Hall C

### Monday, June 18

See presentation descriptions on pages 32 and 36.

10:00 a.m.

iNet DS Mobile Solution, Industrial Scientific Corp.

10:30 a.m.

PhaseCore Heat Activated Cooling Products: SWEDE CarbonX Vest in Action, First Line Technology, LLC

11:30 a.m.

Learn How to Perform Safety Inspections Faster and More Efficiently with ChemSW's New SI Live™ Solution, ChemSW Inc.

Noon

Gasmet Model DX-4040 Portable FTIR Gas Analyzer Identifies "Unknown" Toxic Gases in Emergency Response, Hazmat, and Workplace IH Monitoring Applications, Gasmet Technologies Inc.

12:30 p.m.

NEW! 3M™ Sound Examiner SE-400 Sound Level Meter with NEW! 3M Detection Management Software DMS, Quest Technologies, a 3M company

1:00 p.m.

A New Active Dry Sampler for Low Level Vapor Phase and Particulate Isocyanate Measurements, Supelco, Supelco/Sigma-Aldrich

1:30 p.m.

Portable, Continuous Measurement Formaldehyde Monitor for IAQ Applications, GrayWolf Sensing Solutions

### Tuesday, June 19

See presentation descriptions on pages 44 and 48.

9:30 a.m.

CorTemp Ingestible Core Body Temperature Sensor Technology, CorTemp-HQ, Inc.

10:00 a.m.

Potent Compound Containment, ILC Dover

10:30 a.m.

New Disposable Size-Selective Particulate Samplers, SKC Inc.

Noon

Kanomax Handheld Precision Sound Level Meter with O-dB Function, Kanomax USA Inc.

12:30 p.m.

Labconco Introduces a New Lower Energy Fume Hood, Labconco Corporation

1:00 p.m.

Methamphetamine Lab Recognition and Safety

### Wednesday, June 20

See presentation descriptions on pages 56 and 59.

9:30 a.m.

Introducing the mTrap: The Only Spore Trap Specifically Designed to Efficiently and Rapidly Capture PCR Air Samples, Assured Bio Labs, LLC

10:00 a.m.

Good Lab Practices with Powder Handling in an OEL 3 and 4 Environment, Flow Sciences, Inc.

Noon

AtlasWork™, Atlas Ergonomics

12:30 p.m.

An Online Tool for GHS MSDS Authoring, ChemWatch NA

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 Final Program  
 Standing Sign  
 Booth 1005



Assay Technology  
 Row 800 Aisle Sign  
 Booth 808



Bowen EHS, Inc.  
 Passport to Prizes  
 Booth 1020



Center for Toxicology  
 and Environmental  
 Health, LLC  
 PDC Lunch/Break  
 Co-sponsor  
 Booth 1041



ChemSW, Inc.  
 AIHce Email  
 Booth 1019



Crowcon Detection  
 Instruments  
 Polybag Insert  
 Booth 226



CUNY School of  
 Public Health at  
 Hunter College  
 Final Program



Datachem Software  
 Passport to Prizes  
 Booth 811



E.D. Bullard  
 Polybag Insert  
 Booth 314



Eli Lilly and  
 Company  
 AIHF Fun Run/Walk



EMSL ANALYTICAL, INC.  
 EMSL Analytical,  
 Inc.  
 Passport to Prizes  
 Booth 522



Fauske &  
 Associates, LLC  
 Final Program  
 Booth 119



NEXTTEQ LLC  
 Final Program  
 Booth 611



OHD  
 Final Program  
 Booth 1008



RAE Systems  
 Polybag Insert  
 Booth 308



Raeco Rents  
 Passport to Prizes  
 Booth 1222



RJ Lee Group LLC  
 Final Program  
 Booth 1125



S.E. International  
 Passport to Prizes  
 Booth 1027



Scott Safety  
 AIHce On Demand  
 Co-Sponsorship  
 Booth 452



Sensidyne, LP  
 Lanyards  
 Row 900 Aisle Sign  
 Booth 900



SiteHawk  
 Passport to Prizes  
 Booth 429



SKC Inc.  
 Final Program  
 Web Banner  
 Booth 503



Thermo Scientific - Air  
 Quality Instruments &  
 Portable XRF Analyzers  
 Row 500 Aisle Sign  
 3 Standing Signs  
 Booth 519



TRS RenTelco  
 Web Banners  
 Booth 618



TSI Inc.  
 Final Program,  
 AIHce Email,  
 Row 700 Aisle Sign  
 Booth 700



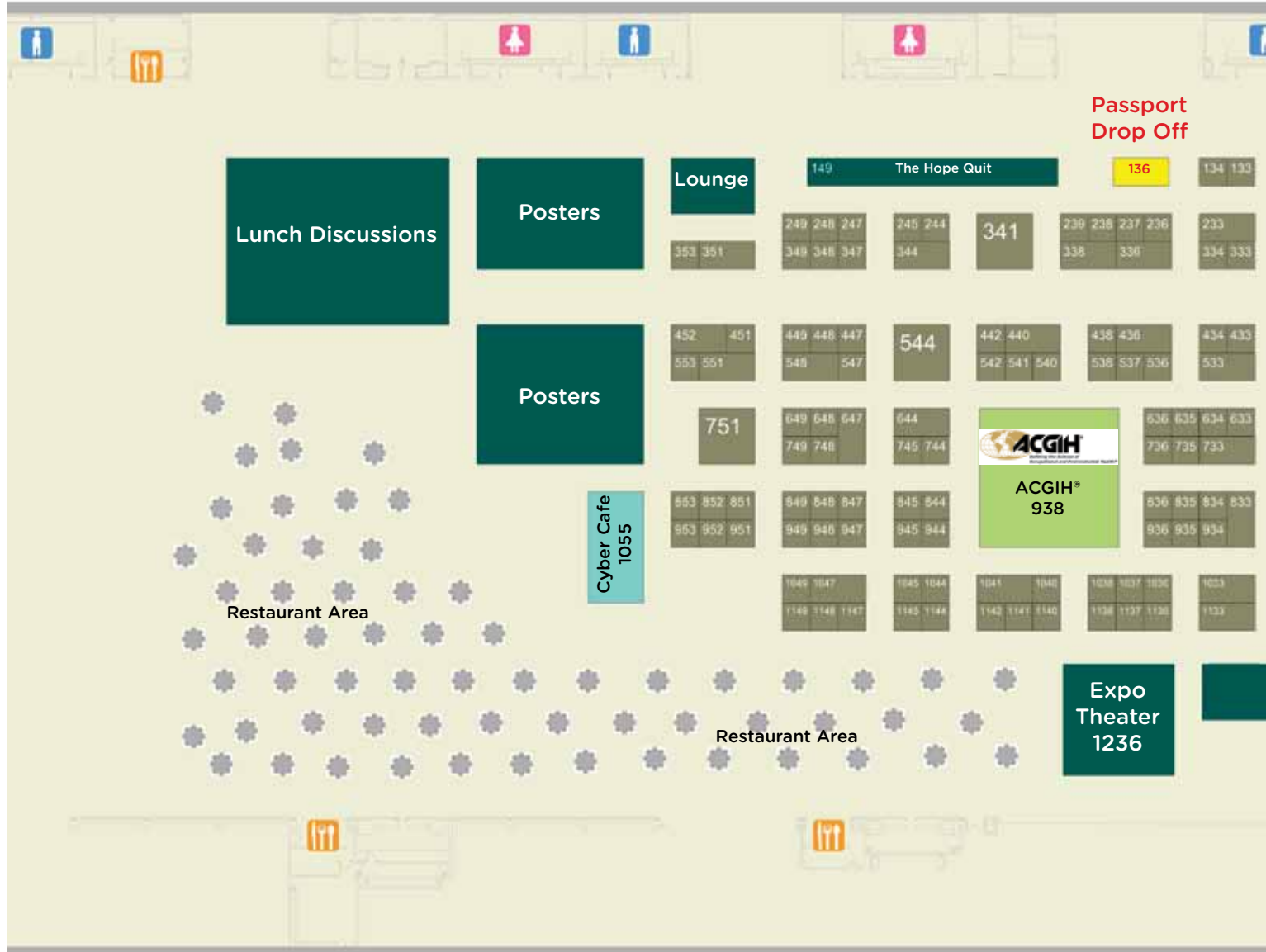
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## Expo Opening Cocktail Reception

Monday from 4:00 p.m.-5:30 p.m.

Bring your complimentary drink ticket from your registration packet.



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### Unbound Engineered Nanoparticles

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### Nanotechnology: Assessment and Control Podium Session

"Multiple Magnification Analysis for Unbound Engineered Nanoparticles Using High-Resolution Electron Microscopy (HR-EM)"

**June 18, 2:30 - 3:00 PM**



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## Expo Hours

- **MONDAY, JUNE 18**  
9:00 a.m.–5:30 p.m.
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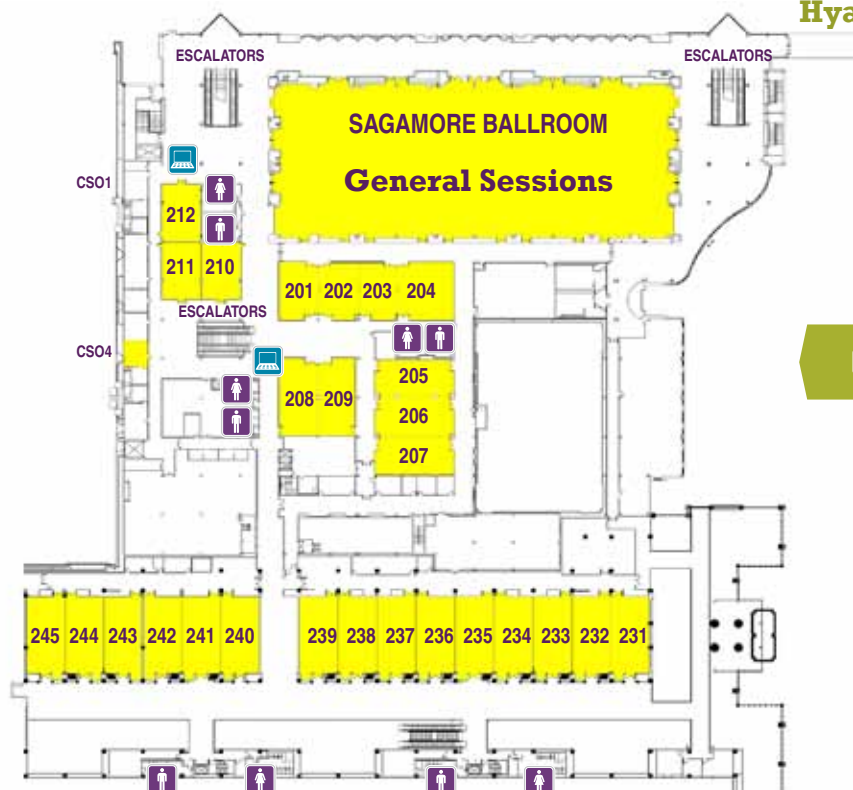




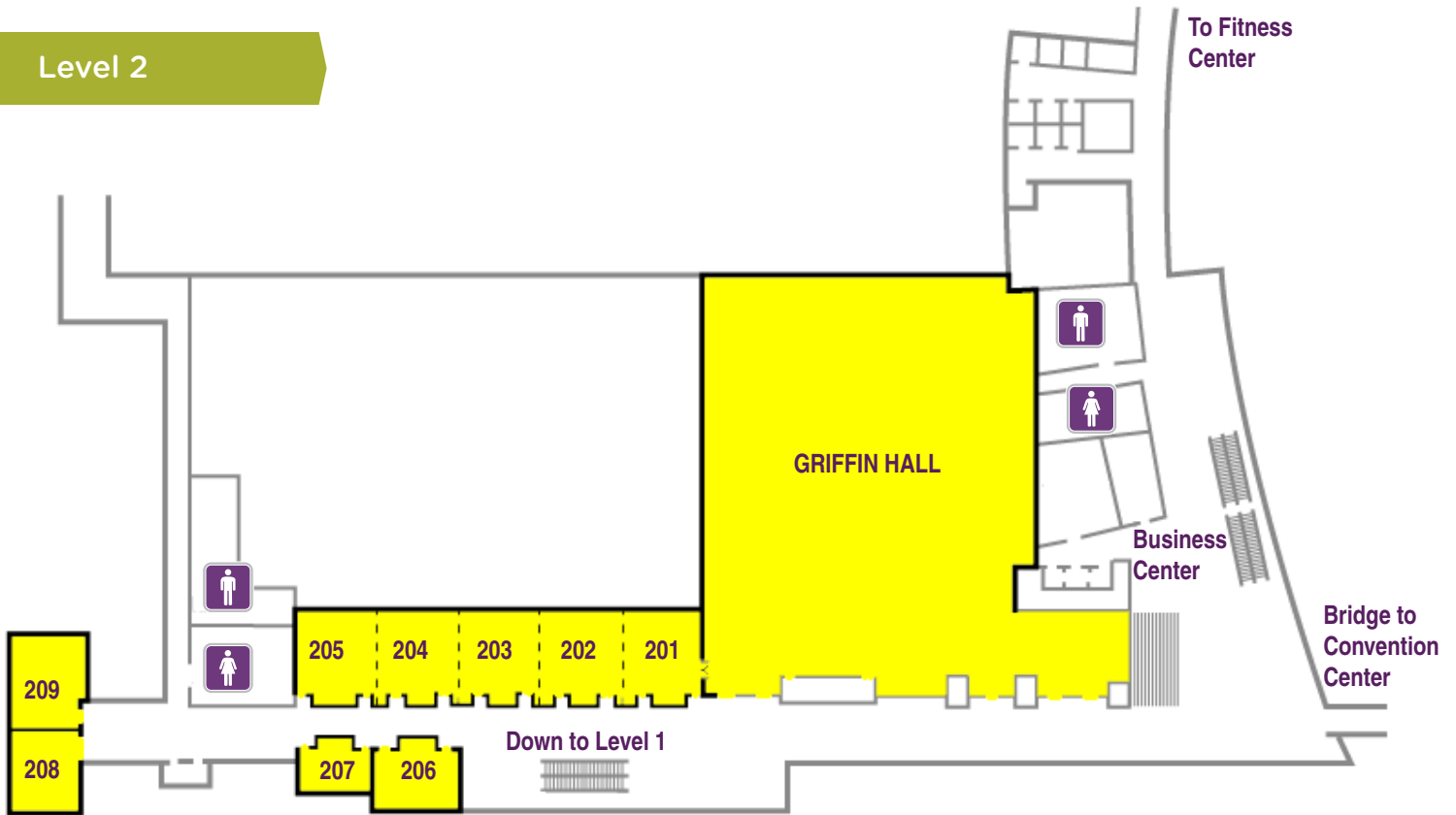


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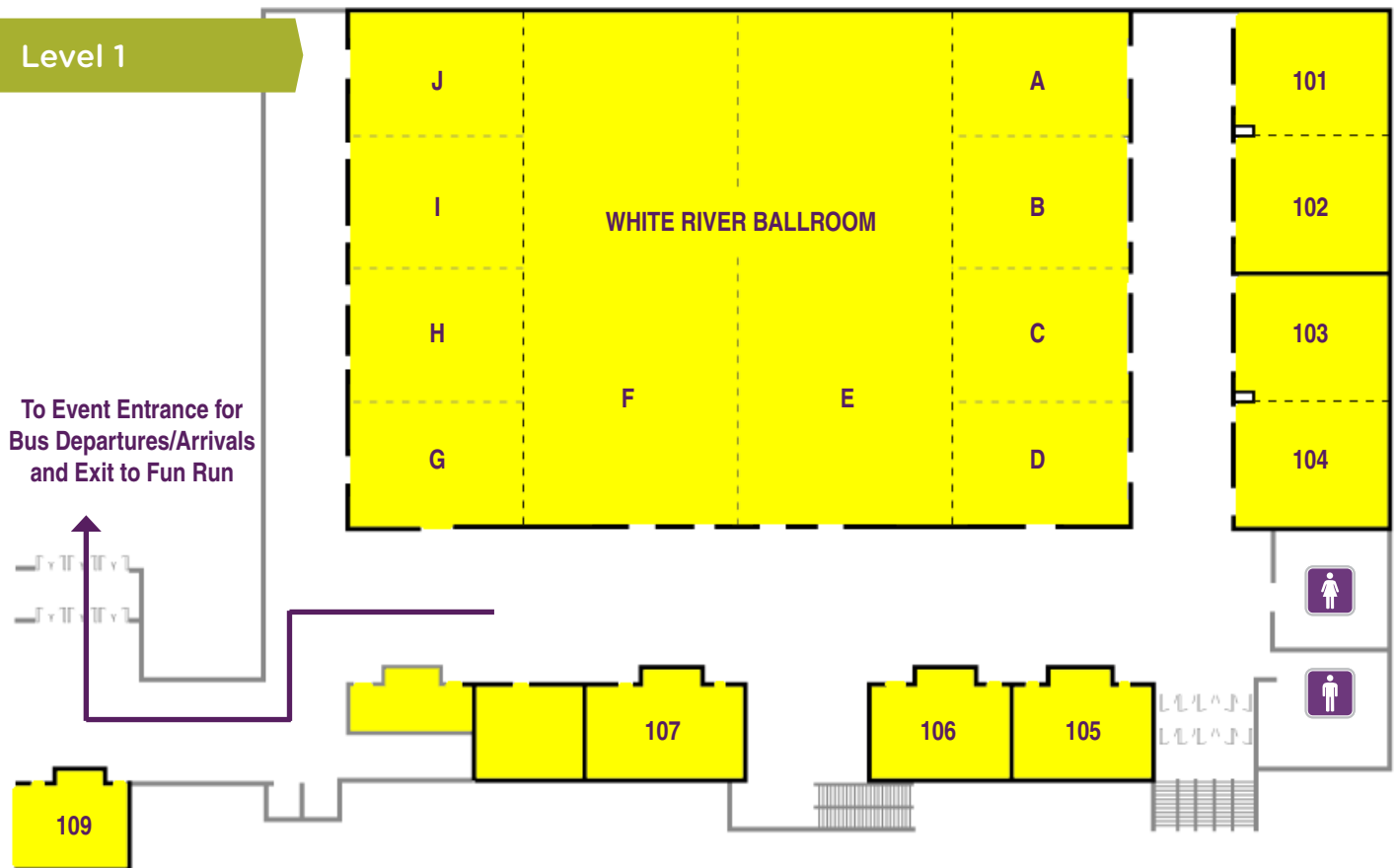
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## Level 2



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Level 3





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