

AHce2011

The Premier Conference & Expo for
Occupational & Environmental Health & Safety Professionals

May 14-19, 2011 + Oregon Convention Center + Portland, Oregon + www.aihce2011.org
2nd International Symposium on Wood Dust + May 17-18, 2011

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Final Program



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SEE THE DRAEGER X-ZONE 5000 IN ACTION AT WWW.DRAEGER.COM/X-ZONE.



AIHce 2011

Innovate. Integrate. Inspire.

Welcome to AIHce 2011 and to the beautiful city of Portland! Get ready for a week of interactive sessions that will leave you equipped with ideas and solutions to bring back and apply immediately to your everyday work. AIHce 2011 is your opportunity to step back from everyday demands and focus on your most important asset — your professional development.

First time benefits add even more value to your registration!

- **New!** Complimentary International Symposium on Wood Dust. Learn more on page 53.
- **New!** AIHce On Demand — full access to the Technical Program. Details on page 28.
- **New!** Lunch included with Full Day PDCs

If you have any questions during the week, stop by Registration or ask any AIHA staff member who will be happy to assist you.

Enjoy your week!

INNOVATE

(vb) to introduce something new; to invent or begin to apply methods and ideas

Innovative sessions, speakers, products and displays will refresh your skills and renew your expertise.

INTEGRATE

(vb) to unite or combine

Integrate current experience with new specialty areas by choosing from sessions that span over 40 topics.

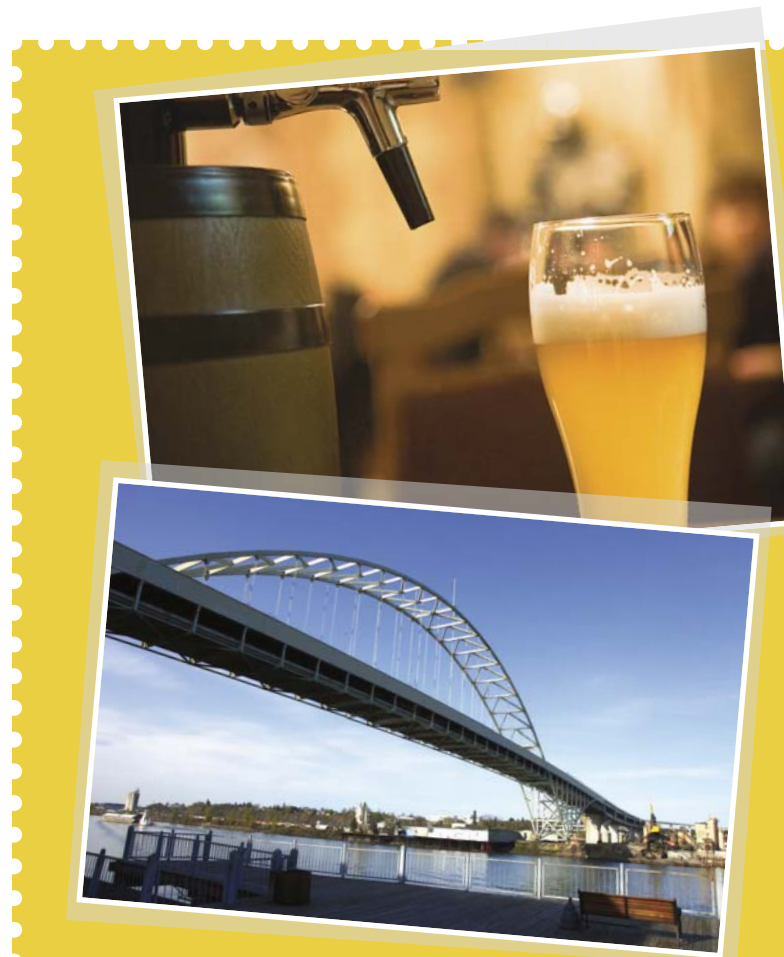
INSPIRE

(vb) to influence or impel

Be inspired by dynamic speakers, fresh faces, hundreds of new products in the Expo and robust education.

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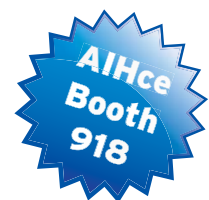
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Thank you to the following volunteers
for their time and expertise in assembling
the 2011 program.

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Local Conference Committee

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Scott Turkle, CIH

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.



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+ General Information

AIHce 2011 is headquartered at the Oregon Convention Center (OCC). Education sessions, the Expo, and most committee meetings are scheduled at the OCC. The majority of evening social activities are located at the Hilton Portland.

AIHce Information

OCC, Holladay Lobby + (503) 963-5757

Contact AIHce staff for general information. Paging and message services are not available.

OCC Information

M.L. King Jr. Lobby

Visit the Welcome Center for assistance with directions in and around the center and for general information on Portland including transportation, shopping and restaurant recommendations.

AIHce On Demand

With the conference recordings from AIHce 2011, you can now reach your educational goals quickly with this library of information available online 24/7. Take advantage of the following:

- + Audio synchronized to presentation slides
- + Downloadable MP3 files and abstract presentations
- + Up to 250 hours of recorded educational content

Stop by the AIHce On Demand booth in Lobby C today!

**price increases to \$225 immediately after AIHce. If you registered at the Premium Registration rate in advance, AIHce On Demand is included — no need to purchase.*

Airport Transportation

Blue Star Shuttle offers a shared ride van service between Portland International Airport and downtown hotels. AIHce's per person discounted rate is \$11 one-way or \$22 round trip. When purchasing a ticket, indicate "AIHce/Industrial Hygiene Conference."

Blue Star Shuttle will pick up passengers going to PDX from the Convention Center provided 24 hour notice is given. To make a reservation, visit <http://www.bluestarbus.com/downtown-express.php> or call (503) 249-1837.

Taxi fare from downtown Portland to the airport is \$35-45, plus tip. If you wish to take a cab to the airport or around town, it's best to call ahead. A limited number of cabs are available "on the street."

AIHA International Reception

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



Sponsored by Galson Laboratories

Expo Highlights

OCC, Halls B-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
- + 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
- + Monday, Tuesday and Wednesday Luncheon Discussions
- + Restaurants

AIHA® and ACGIH®

AIHA InfoCentral, Booth #913

The place to be — AIHA's InfoCentral! Take advantage of 15% off AIHA publications and education (AIHA members enjoy free shipping!) and check out these titles debuting at AIHce:

- + The Occupational Environment: Its Evaluation, Control, and Management, 3rd edition
- + Industrial Hygiene Reference & Study Guide, 3rd edition
- + Laboratory Quality Assurance Manual, 4th edition
- + 2011 ERPG/WEEL Handbook and Update Sets
- + Monitoring for Health Hazards at Work, 4th edition

Special book signing! On Monday at 10:00 a.m., Opening Session Keynote speaker, Gene Kranz, will be at the booth signing his book, *Failure Is Not an Option: Mission Control from Mercury to Apollo 13 and Beyond*.

View the newly updated www.aiha.org and get information about membership, upcoming events and other AIHA products and services.

Visit AIHA's InfoCentral for special events, giveaways, hot new products and much more!

The ACGIH Pavilion, Booth #641

Staff will demonstrate how ACGIH defines the science of occupational and environmental health by showcasing the member benefits, outstanding publications and software, and upcoming continuing education courses and webinars 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

OCC, 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. Authors are present during specified times to discuss their research. See p. 90.



+ General Information

Luncheon Discussions

OCC, Hall D

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.

Student and Early Career Professionals

Monday, 12:30 p.m.–1:30 p.m.

NIOSH Table Talks

Tuesday, 12:30 p.m.–1:30 p.m.

Volunteer Group Tech Talks

Wednesday, Noon–1:00 p.m.

27th Annual AIHF Fun Run/Walk

Tuesday, 6:30 a.m.–8:00 a.m.

Waterfront; meet at Ankeny Pavilion

MAX Light Rail Stop: Skidmore Fountain (Red/Blue lines)

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.

Sponsored by Scott Safety



AIHce Pin

Add bling to your badge and support the AIHF by purchasing the AIHce 2011 pin at Registration, the AIHA booth or the Volunteer Collaboration Café. Wear it to show your support throughout the conference week!

Annual Blood Drive

OCC, Room A103

Monday 10:00 a.m.–3:00 p.m.

Although walk-ins are welcome, you are encouraged to make an appointment early in the day to reduce the wait time. Random cash prizes of \$250, \$150, and \$100 will be awarded; be sure to swipe your Expocard at the door.

Sponsored by AIHA's LCC and administered by the American Red Cross



Business Centers

OCC, Level 2

Limited, self-service; credit card only.

Hilton Portland + (503) 226-1611 ext. 2142

Monday–Friday, 8:00 a.m.–4:30 p.m.

Self-service available 24-hours a day; credit card or room charge only.

CareerAdvantage Development Fair 2011

OCC, Hall A + (503) 963-5754

Monday 8:00 a.m.–4:00 p.m.

Tuesday 8:00 a.m.–4:00 p.m.

Wednesday 9:00 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 23 for the list of scheduled events.

Employers seeking to fill an open position, stop by and quickly post your jobs 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. Visit the Development Fair in Hall A to find out more.

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 hall during regular Expo hours. A name badge is required and will be provided no charge.

Coat/Luggage Check

OCC, Hall A + Saturday–Thursday, 7:30 a.m.–5:30 p.m.

Non-valuable items may be left at owner's discretion; AIHce is not liable for lost articles. Small fee may apply.

Cyber Café

OCC, Lobby E

Saturday Noon–5:00 p.m.

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 throughout AIHce. Twenty additional terminals are located in the Expo and are accessible when the Expo is open. On Thursday, computers in Lobby A will be available until 1:00 p.m.

Sponsored by Scientific Analytical Institute, Inc.



First Aid and Assistance

OCC, Lobby A (adjacent to Registration)

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

Lost and Found

Check-in Kiosk, Holladay Lobby + (503) 963-5757

Kindly bring articles left behind in meeting rooms or the Expo to the Kiosk.

+ General Information

MSA/AIHA® Reception

Everyone who is anyone will be at this must-attend annual event held on Tuesday evening at 6:30 p.m. at the Hilton Portland. Plan to attend!



Jointly sponsored by AIHA and MSA.

Press Room

OCC, D132 + (503) 963-5756

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.

Registration and Hotel Reservations

OCC, Lobby A + (503) 963-5753

Friday 4:00 p.m.–6:00 p.m.
Saturday–Tuesday 7:00 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 dues in full *prior* to AIHce.

Registrants must wear name badges to be admitted to technical sessions and to the Expo. Courses, tours, AIHF activities and selected social activities require a ticket. The deadline to cancel a ticket and receive a refund was April 27. No refunds will be issued on-site; once tickets are purchased, fees are not refundable. Course ticket exchanges are permitted.

Professional registrants receive the Final Program, Addendum, and Lanyard. Booth personnel receive a copy of the Final Program.

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

Lanyards provided by Sensidyne, Inc.



Speaker Ready Room

OCC, C124 + (503) 963-5760

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

Staff is available to answer general questions and distribute ribbons and expo hall passes for poster sessions. Computer workstations, LCD projectors and microphone training are also available.

Speaker Ready Room check-in:

- + Mandatory for all Technical Session (Podium, Roundtable and Crossover) presenters, moderators and monitors, 30 to 60 minutes prior to the start of their session. Presenters are required to confirm recording permissions and to meet with an audiovisual technician to ensure presentations are compatible with session equipment. *Only AIHce-supplied computers may be used in technical sessions.*
- + Not required for PDC instructors; however, instructors are welcome to use the room to prepare presentations. *AIHce does not provide computers to course instructors.*

Technical and Social Tours

Depart from M.L. King Jr. Lobby, Mezzanine

Registrants participating in a technical or social tour should be in the lobby fifteen minutes prior to the published time of departure.

All Technical Tours are sold out through advance registration. If you are interested in a technical tour, check at Registration to see if any ticket holders have turned in tickets for re-sale. Social Tour tickets are still available for purchase.

Volunteer Collaboration Café

**OCC, Lobby C
Sunday–Wednesday, 7:30 a.m.–5:00 p.m.**

Stop by the Volunteer Collaboration Café — an interactive spot designed for networking with colleagues and learning about AIHA volunteer opportunities. See page 24 for details.

Where to Eat

Outlets located in the Lobbies offer beverages, sandwiches and light snacks. Restaurants in the Expo are open Monday through Wednesday and serve a variety of options. Many of Portland's downtown restaurants are just a short light rail ride from the OCC; check with staff at the Visitor Center for recommendations.

Wireless Lounges

Two wireless internet lounges are available in Ginkobery Concourse and Lobby E and are open daily.

PDC Luncheons

Light lunch is included in the one and two day courses at the OCC. Saturday half-day PDC registrants are welcome to purchase a luncheon ticket for \$20 at Registration. The CSP and EHMM courses at the Hilton also include lunch; no ticket required. Participants in the half day Sunday courses at the Hilton are on their own for lunch.

Celebrate the 40th Anniversary of the OSH Act

Sign the Anniversary Card!



AIHce 2011 is celebrating the 40th Anniversary of the OSH Act, which created OSHA and NIOSH. Special recognition will occur during the Wednesday General Session, which includes a keynote presentation by OSHA Director, Dr. David Michaels. Show your support for the OSH Act by signing the specially created anniversary card in the Lobby. We are hoping to get thousands of signatures, so please stop by and sign the card!

+ Certification

Documentation

Access your AIHce continuing education records online—any time, from anywhere! Visit www.aiha.org, 'Education & Conferences.'

Downloadable AIHA educational transcripts allow you to:

- + Review educational credits (CM, COC, CEU points) awarded by AIHA/AIHce
- + Update and add records to your transcript from other organizations
- + Track training and professional development contact hours
- + Print a complete history as often as you like

AIHA educational transcripts:

- + Provide AIHce PDC certification information
- + List AIHce attendance information at technical sessions
- + Do not track presentation points for authors, speakers, or instructors unless self-entered
- + Allow 45 days from course completion for information to appear on transcript

AIHA maintains attendance records for seven years. Registrants are responsible for retaining all documentation for future reference and/or certification audits. AIHA charges a \$50 replacement fee for all documentation (prior to 2010) verifying attendance. For complete information, visit www.aiha.org/CMReplacement.

Attendance and full participation is required to earn certification points; partial credits are not awarded.



The **American Board of Industrial Hygiene** (ABIH) has approved CM points for AIHce 2011 as follows:

- + PDCs and symposium—see individual descriptions.
- + Technical sessions, science symposium and tours—maximum 4.5 CM points:
 - Daily: 0.5 CM point per half day
 - Wednesday eve: 0.5 CM point

Presenters, authors and session personnel.

- + PDCs—0.33 CM point per hour of instruction
- + Posters—1.0 CM point
- + Technical sessions (CR, RT, PO, and PS):
 - Presenters: 1.0 CM point for presentation time > 20 minutes
 - Authors (non-presenters): 0.5 CM point
 - Arrangers receive 0.5 CM point in Category 7
 - Moderators do not receive CM points
 - Monitors do not receive CM Points

For proof of attendance ABIH accepts:

- + PDCs—AIHA Educational Transcript
- + General, technical sessions, science symposium, and tours—AIHA Educational Transcript
- + Evidence of physical presence (i.e., approved expense report, hotel, meal, or parking receipts; ABIH CM Attendance Verification Form)
- + Authors, PDC instructors, and technical session speakers—information listed on the AIHce website or in the AIHce Advance or Final Programs.

CM Approval Numbers for AIHce and individual PDCs will be listed on educational transcripts. Questions regarding CIH certification maintenance should be directed to ABIH at (517) 321-2638.

IH Technical or Professional Committee service is awarded Category 2 CM points up to a maximum of 5 CM pts per 5 year CM cycle. Participants receive 1 CM point/year as Chair and 0.5 CM point/year as a committee member.



The Registration Maintenance (RM) Committee of the **Canadian Registration Board of Occupational Hygienists** (CRBOH) has awarded the following points. Registrants claiming points must provide proof of attendance.

- + 1.0 RM point per conference day
- + 1.0 RM point for each full-day PDC
- + 0.5 RM point per half-day PDC



AIHA is approved by the **International Association for Continuing Education and Training** (IACET) to award CEUs to participants who successfully complete courses. In obtaining this approval,

AIHA has demonstrated that it complies with the American National Standards Institute ANSI/IACET 1-2007 standards, an internationally recognized set of standards for good practice.

As a result of its authorized provider membership status, AIHA is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET 1-2007 standard. For point values, see individual PDC and symposium descriptions.



AIHA is authorized by the **Board of Certified Safety Professionals** (BCSP) to issue COC points in conjunction with the CSP certification. For point values, see individual PDC and symposium descriptions.

BCRSP

The **Board of Canadian Registered Safety Professionals** has awarded 2.0 certification maintenance points (CMP) for attending the full conference, May 16–19, 2011.



Customize and maximize your AIHce experience!

Use these handy technology tools to organize your conference schedule and connect with others. Put AIHce in the palm of your hand by downloading information to your mobile device.

Educational Enhancements

Program Planner

www.aihce2011.org

Stay organized throughout the week; use this tool to upload your conference schedule.

e-abstract Book

www.aihce2011.org

Select, download and prioritize abstract presentations by OEHS professionals and students.

e-Handouts

www.aiha.org/eMats

Select PDCs offer convenient, searchable resources that can easily be transferred, stored and retained. (Registered PDC participants only.)

Collaborative Learning

www.aiha.org/eMats

Start or join a discussion, share lessons learned, access references and ask follow-up questions — post-PDC. (Registered PDC participants only.)

AIHce Virtual Tech Sessions

www.aiha.org/VirtualTechSessions

Colleagues not attending AIHce? Connect them virtually to select Wednesday and Thursday sessions ... Live!

AIHce on Demand

www.aihce2011.org

Take AIHce home! Replay a specific technical session or the full conference.

After AIHce

Check the AIHce website for the conference recap. View web clips of meeting highlights, news, interviews with prominent colleagues and a preview of AIHce 2012, June 16–21, in Indianapolis, IN.

Your Social Connections

Cyber Cafe

Expo and Lobby E

Sponsored by Scientific Analytical Institute

Locate colleagues and connect face-to-face or leave/retrieve messages. Stay in touch with home and office with complimentary web access.



Laptop Lounge

Keep family, friends, coworkers, clients and remote office access one click away on your laptop

Twitter, Facebook, LinkedIn

Read what people are Tweeting, Friend other AIHce 2011 Fans or plan a Meetup.

Twitter:

[#aihce](http://www.twitter.com/AIHA) and [#aihcesession](http://www.twitter.com/AIHA)

Facebook:

www.facebook.com

LinkedIn:

www.linkedin.com

On and Beyond the Expo Floor

ChirpE

www.chirpe.com/aihce2011

Search for exhibitors online. Save favorites, build your own expo plan, and sync to your mobile device.

Virtual Expo

www.aihce2011.org/expo2011

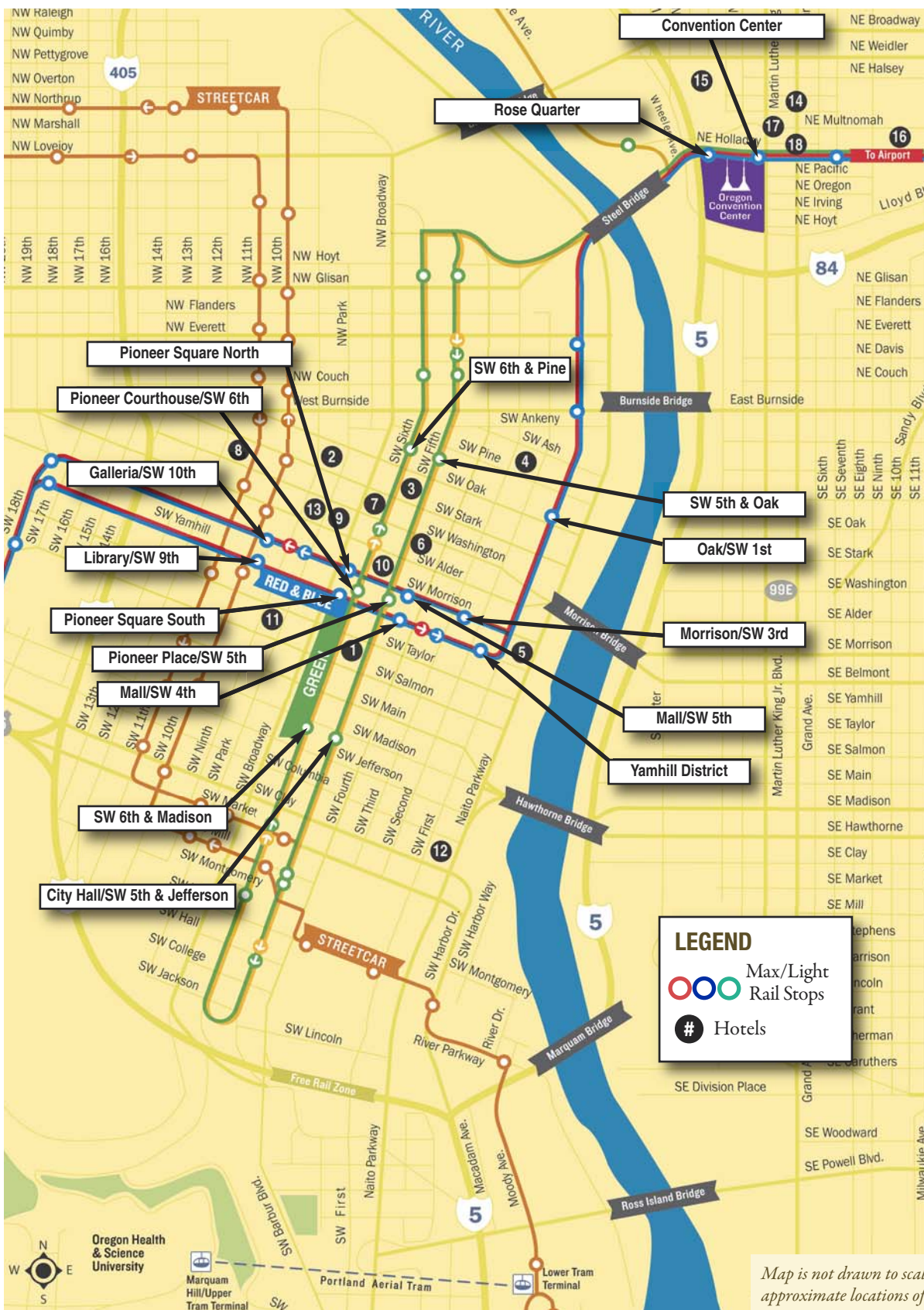
Plan your hall experience — search for exhibitors, products, and services.

Expo Theater Presentations

Expo, Hall D

Miss a presentation? View exhibitor sponsored product demos on the web and see what's new in 2011.

+ Hotel + Transportation Guide



1. **Hilton Portland & Executive Towers**
921 SW 6th Avenue
 2. **The Benson Hotel**
309 SW Broadway
 3. **Courtyard by Marriott City Center**
550 SW Oak Street
 4. **Embassy Suites Hotel Portland**
319 SW Pine Street
 5. **Hotel Fifty Portland**
50 SW Morrison Street
 6. **Hotel Monaco**
506 SW Washington Street
 7. **Hotel Vintage Plaza**
422 SW Broadway Street
 8. **The Mark Spencer Hotel**
409 SW 11th Avenue
 9. **Marriott City Center Portland**
520 SW Broadway
 10. **The Nines Hotel**
525 SW Morrison Street
 11. **Paramount Hotel**
808 SW Taylor Street
 12. **Portland Marriott Downtown Waterfront**
1401 SW Natio Parkway
 13. **Westin Portland Hotel**
750 SW Alder Street
- Lloyd District**
14. **Courtyard by Marriott Lloyd Center**
435 NE Wasco Street
 15. **Crowne Plaza Portland**
1441 NE Second Avenue
 16. **Doubletree Portland Hotel**
1000 NE Multnomah Street
 17. **La Quinta Inn**
431 NE Multnomah Street
 18. **Red Lion Portland Convention Center**
1021 NE Grand Avenue

Map is not drawn to scale and depicts approximate locations of hotels to the convention center.

All awards will be presented at the Opening General Session on Monday, May 16, 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 **Lauralynn Taylor McKernan, ScD, CIH**. Dr. McKernan has significantly advanced the protection of workers through her contributions in validating new techniques

to quantify lead exposures, investigating aerobiological exposures in aircraft and airports, providing national leadership on diacetyl and flavoring exposures as well as her participation on CDC emergency response efforts during the Anthrax Investigation, Hurricane Katrina, and the Deepwater Horizon Oil Spill.

Donald E. Cummings Memorial Award



The Donald E. Cummings Memorial 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 the profession of industrial hygiene. This year's Cummings Award recipient is **Roy M. Buchan, DrPH, CIH**. Dr. Buchan has devoted his entire professional life to the advancement of the knowledge and practice of industrial hygiene.

He is one of those rare "agents of change" whose passion to improve conditions in the world has been truly effective. Dr. Buchan has been instrumental in creating healthier workplaces and workers around the world, not only by his personal efforts, but by the growing cadre of trained and educated practitioners of industrial hygiene that his determined efforts have created.

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. **Richard D. Fulwiler, ScD, CIH, CSHM** will be awarded AIHA's distinguished service award for his many years of service to AIHA and to the industry. After a career which spanned nearly 30 years with Procter & Gamble, Dr. Fulwiler serves as president of Technology Leadership

Associates, a consultancy dedicated to increasing the level of individual effectiveness in health, safety and environmental professionals. He has developed programs to emphasize the importance of industrial hygiene as a critical corporate component for a successful business plan. This represents the direction that our profession, and AIHA, has identified as the future of our profession. Dr. Fulwiler has also served as an officer of AIHA, the Academy and the Foundation.

Kusnetz Award



The Kusnetz Award was established in 1987 and is named for its donors, Florence Kusnetz and AIHA Past President Howard Kusnetz. This award was founded to honor a certified 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 Kusnetz Award recipient is **Sampa Das Ostrem, CIH**. With over 14 years of experience in health and safety, she has been the principal of her own industrial hygiene consulting company since 2005. Throughout her career, Ms. Ostrem has put the ethics of the health and safety profession above all else. She has proven that this high ethical standard can protect the worker, the profession and run a successful business in the process.

Alice Hamilton Award



The Alice Hamilton Award was established in 1993 by the AIHA Board of Directors. This award is presented to an outstanding woman who has made a definite, lasting achievement in the field of occupational 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 award winner is **Chris L. Laszcz-**

Davis, MS, CIH, REA. As founder and principal of The Environmental Quality Organization, LLC, Ms. Davis has more than thirty years of executive management, professional, technical and consulting experience in environmental affairs, occupational health and safety, operational integrity, risk management and product stewardship. Her strengths include leadership, problem solving, teamwork and the ability to bring diverse parties and perspectives to resolution.

Social Responsibility Award

Established in 2009 and cosponsored and supported by Bureau Veritas, the Social Responsibility 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 issues. This year's winner is the **Maquiladora Health and Safety Support Network (MHSSN)** located in Berkeley, California. Since its founding in 1993, over 400 occupational health and safety professionals in the MHSSN have provided pro bono trainings, technical assistance and support for workplace health and safety to worker organizations in Mexico, Central America and the Caribbean, Indonesia and China. The goal of the network's efforts has always been to build the OHS capacity of local organizations, to reduce injuries and illnesses among workers, to reduce the pain and suffering to injured and ill workers, and to reduce the burden to society (especially in poor countries) generated by sick and injured workers and survivor families. The Network coordinator, Garrett D. Brown, MPH, CIH, will accept the award on behalf of MHSSN.

William P. Yant Award



The William P. Yant Award was established in 1964 to commemorate the leadership and breadth of contributions to industrial hygiene 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 Yant Award winner is **Trevor Ogden, BSc, PhD**

of the United Kingdom. Dr. Ogden is the chief editor of the international journal *Annals of Occupational Hygiene* and as such has played a very important role in shaping the science and practice of occupational hygiene worldwide. Since taking on the role of chief editor in 1997, the number of submissions and the impact factor of the journal have doubled. Before taking on the role of chief editor, Dr. Ogden had a distinguished career in occupational hygiene research, first at the Institute of Occupational Medicine in Edinburgh and then later at the UK National Health and Safety Laboratory (the equivalent of NIOSH).

President's Award

The President's Award is given to an individual, task force, special interest group, or local section for outstanding contribution to efforts to achieve the mission of the AIHA during the presidency year. Kept secret until conference, the award winner will be announced and honored at the AIHA President's Reception on Wednesday, May 16, between 6:30 and 8:00 p.m.

2011 AIHA Fellows

The 2011 Fellow Award winners will be honored during the newly formed AIHA Fellows SIG meeting on Wednesday, May 16, and again during the President's Reception. Members chosen to be Fellows were nominated by colleagues in the profession 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® Awards

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 who demonstrates significant contribution to the profession. This year's recipient is **Lilia Chen, MS, CIH**. Ms. Chen works for the Hazard Evaluations and Technical Assistance Branch of NIOSH. She has been the primary project officer on 60 health hazard evaluations, and assisted on

numerous others. She has presented her findings at national and international conferences and the results of her evaluations have resulted in publications and articles. Ms. Chen led a nationwide NORA-funded field study investigating exposures to a high level

disinfectant used in healthcare facilities among other projects. She received her BS in Biology and Environmental Studies from Tufts University and her MS in Public Health from the University of Illinois at Chicago. She has been a member of ACGIH® since 2003. Ms. Chen continues to further her knowledge and expertise through continuing education and challenging work assignments. The award will be presented at the ACGIH® Membership Reception and Annual Meeting of the Membership on Sunday, May 15 and at the AIHce Opening Session.

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 **Jimmy L. Perkins, PhD, CIH**. Dr. Perkins began his academic career at the University of Alabama at Birmingham where he spent 15 years as the IH Program Director and Department Chair. He later joined the UT SPH San Antonio Regional Campus as

Regional Dean. Dr. Perkins has served the profession as a member of the NIOSH Safety and Occupational Health Study Section, the ASTM F23 on protective clothing, as Chair of ABIH, and in various positions in AIHA local sections and Committees. He has been a member of ACGIH® since 1985 and served on its Board of Directors from 2007-2010, serving as Chair in 2009. Dr. Perkins has authored numerous publications including the *Modern Industrial Hygiene* series in ACGIH®'s *Signature Publications*. The award will be presented at the ACGIH® Membership Reception and Annual Meeting of the Membership on Sunday, May 15 and at the AIHce Opening Session.

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 **Roger Alesbury, MS, FFOH, CFIOSH**.

Mr. Alesbury is a founding director of The Occupational Hygiene Training Association (OHTA) and chairs its Leadership Group. OHTA is a non-profit voluntary organization providing global training and qualifications programs to protect worker health. An engineer by training, Mr. Alesbury spent most of his career working internationally as an Industrial Hygienist in the oil and chemical industries. For a decade prior to retirement, he was Director of Industrial Hygiene for BP. He is a Fellow of the Faculty of Occupational Hygiene, Chartered Fellow of the Institution of Occupational Safety and Health, a Past President of the Institute of Occupational Hygienists and Past President of BOHS. He has published many articles and reviews on his main areas of interest relating to control of exposures from the work environment and building occupational hygiene capability in developing countries. This award will be presented at the AIHce Opening Session.

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 **Len Levy OBE, PhD, FFOM, FBTS**. Dr. Levy is currently an Emeritus Professor of Environmental Health in the Institute of Environment and Health at the University of Cranfield, United Kingdom. Prior to this position, he was Head of Toxicology and Risk

Assessment at the UK Medical Research Council's Institute for Environment and Health at the University of Leicester. Dr. Levy holds a doctorate in experimental pathology from the Institute of Cancer Research in London. He has held academic positions at the University of Aston and at the University of Birmingham's Institute of Occupational Health. Dr. Levy has published more than 250 papers on occupational carcinogenesis, occupational and environmental toxicology, risk assessment and risk management and the regulatory aspects of both environmental and occupational air standards. He received the OBE for Services to Health and Safety in 2000. He currently serves as Chair of the influential UK Interdepartmental Group on Health Risks from Chemicals (IGHRC) on behalf of the UK Government. The award will be announced at the AIHce Opening Session and presented at the Stokinger Lecture on Thursday, May 19.

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 each year in the *Journal of Occupational and Environmental Hygiene* are reviewed by the Aerosol Technology Committee.

Donna Doganiero Award

The AIHA Safety Committee presents a Best Crossover Session Award for an AIHce presentation of exceptional quality and one that has a 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 safety and hygiene forward.

Environmental Issues Committee Rachel Carson Award

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

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 the principal instructor for several years of the popular PDC "Prevention, Determination, and Remediation of Biological Contamination in Indoor Environments." The award, a plaque and honorarium, 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 journal 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.

Larry and Ruth Birkner Award

The Birkner Award is given 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 achievement in one of several management areas in industrial hygiene practice: a significant achievement in one or more aspects of industrial hygiene management, significant 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 on noise-related topics at AIHce. The award is determined by a vote of the Committee and is based on registrant evaluations.

Occupational and Environmental Medicine Committee Award

The Committee plans to recognize an individual for excellence in the field of occupational and environmental medicine. Judges will 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.

Real-Time Detection Systems Committee Outstanding Presentation Awards

All Real-Time Detection Systems Committee poster presentations are eligible for two awards: Best Poster Session 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 evaluations of the Real-Time Detection Systems Committee and registrants at the presentation.

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, a plaque and donation of training materials, is given to the best construction-related paper, presentation, or PDC 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 2011 Upton Sinclair Memorial Lecture will be delivered by Jim Morris of the Center for Public Integrity at 10:30 a.m. on Tuesday.

2010 AIHA Bestseller

This award is presented to the publication that sold the most copies during the year. The 2010 Bestseller is presented to **Anthony Martinez, CIH, CSP**, author of the Industrial Hygiene Desk Reference Card. In 2010, AIHA sold 510 copies of this publication. This award will be presented Monday, May 16, at the Volunteer Recognition Reception.

2010 Critic's Choice Award

This award honors a publication completed in 2010 and evaluated by members of the Publications Committee. The committee selected this publication based on its impact on the IH profession, originality, and the quality of writing. The recipient of the 2010 Critic's Choice is **Bernard D. Silverstein, CIH**, editor of the *AIHA Value Strategy Manual*. The award will be presented at the Volunteer Recognition Reception.

The Golden Seed Award

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

AIHce Best Poster Award

This Award is selected based on two criteria: (1) technical content—organization of the 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.



The graphic features a central purple arrow pointing right with the text "Redefining Our Future" inside it. Surrounding this are various other arrows in blue, green, and purple, some pointing right and some pointing left. In the top left corner, there is a logo for "aih ce" and a box that says "CO-SPONSORED BY AIHA & ACGIH". The background is a light green grid pattern.

AIHce INDIANAPOLIS
2012 June 16–21 » aihce2012.org
THE PREMIER CONFERENCE AND EXPO FOR OEHS PROFESSIONALS

+ Social Tours

Portland offers a unique mix of activities — both indoor and out — and has something for everyone. With short blocks, elegant gardens, iron bridges, outdoor art, and intriguing architecture, you'll enjoy getting to know this diverse and slightly off-beat city with a personality all its own.

Fees include coach transportation, professional escort, and admissions where applicable. Purchase tickets at registration.* Board bus fifteen minutes prior to scheduled departure from the M.L. King Jr. Lobby and the Hilton, 6th Street entrance.

Monday

ST-01 Portland Highlights

12:30 p.m.–4:30 p.m., \$50 per person



Get to know Portland on this “windshield” tour of the city’s highlights — Pioneer Square, Saturday Market, the Steel Bridge, Waterfront Park, the Pearl District and Voodoo Doughnuts

to name a few...

Stop at Pittock Mansion, decorated with a mix of Turkish, English and French designs using Northwest materials and featuring the technology of the time — a central vacuum system, intercom, and indirect lighting.

From Pittock Mansion, it's a short ride to the International Test Rose Garden in Washington Park. The Garden features 600 varieties of roses which should just be budding in May!

ST-02 Microbrew Hop

4:00 p.m.–8:00 p.m., \$65 per person



Oregon produces all of the ingredients it takes to make great beer — fragrant hops from the Willamette valley, grains from the eastern plains, crystal clear waters from the Cascades and people

with a pioneering spirit to complete the recipe. Discover the reason Portland’s popular microbrews receive national recognition.

Visit three of Portland’s popular brewpubs, each featuring its own distinctive brews. Lift a pint with fellow conference-goers and enjoy pub fare (at one brewery) as your guide shares a little of the history of Oregon’s renowned microbrew industry.

*Advance purchased tickets are nonrefundable.

Individuals with special dietary needs participating in ST-04 and ST-06 should see staff at the tours desk by noon, the day prior to the scheduled tour departure.

Tuesday

ST-03 City Art Trek

9:00 a.m.–Noon, \$22 per person



You’ve seen Portland by bus now see it up close and personal! Join your guide as he shares anecdotes that bring Portland’s history to life.

Uncover the hidden treasures of Pioneer Courthouse Square.

See Portlandia, the second largest hammered copper statue in the country. Stroll through historic South Park in the Cultural Arts District. Meander along Waterfront Park where the Willamette River, outdoor works of art and Portland’s many bridges converge.

Total walking distance = 1 mile. Sturdy shoes, comfortable clothes, hat, sunglasses, sun protection recommended. Snack stop along the way.

ST-04 “DeVine” Wines

12:30 p.m.–5:30 p.m., \$65 per person



Visit one of the most scenic and prolific wine growing regions in the Pacific Northwest — Yamhill County. Travel past rolling hillsides, picturesque vineyards, and tidy orchards to visit two of the area’s

finest vineyards, Duck Pond Cellars and Erath Vineyards.

Yamhill County’s vintners produce wines that consistently receive the highest honors in U.S. and international competitions.

Tour one winery. Sample tastings at both wineries, boxed lunch included.

Tuesday

ST-05 By Gorge!

1:00 p.m.–5:00 p.m., \$40 per person



Experience the grandeur of the Columbia River Gorge and discover the ecology and history of one of the world’s most magnificent landscapes. Travel along the mighty Columbia River and

stop at Multnomah Falls, the most spectacular of the waterfalls. Stand at the base of the falls and revel in their splendor, visit the gift shop and interpretive center, or walk the Simon Benson Bridge.

Continue on to Bonneville Dam and learn how the dam operates, watch fish migrate through the underwater fishways, and discover how ships navigate the river.

Wednesday

ST-06 Portland Spirit

11:00 a.m.–2:30 p.m., \$55 per person



Join your guide for a short walk from the Hilton to Waterfront Park. Board the Portland Spirit and set sail on a wonderful luncheon cruise on the Willamette River.

Spend a leisurely afternoon sailing past towering buildings, under historic bridges, and past stately riverfront homes. Enjoy a delicious onboard lunch while being serenaded by a piano interlude.

Lunch includes a plated entree selected by each guest, coffee, tea, and soft drinks; appetizer, dessert, and other beverages available for purchase.

Security measures: Participants 18 years and older must present photo ID. All carry-on bags are subject to inspection and passengers may be photographed upon boarding.

Welcome to Portland! Brunch

Admission by ticket.

Registered spouses and guests are invited to enjoy a leisurely brunch and learn what Portland has to offer. Get tips on what to do and see during your stay. See who is attending AIHce and meet old friends at this annual event. The brunch is scheduled at 10:00 a.m. on Monday at the Hilton.

+ Technical Tours

On All Tours

... to insure 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) are prohibited. Briefcases, backpacks and totes are discouraged. Appropriate attire, including slacks (no shorts or skirts) and flat, closed sturdy walking shoes are a must!

Additional PPE and restrictions detailed below, if applicable. Board bus fifteen minutes prior to scheduled departure from the M. L. King Jr. Lobby entrance. Tickets are nonrefundable.

Monday, May 16



SOLD OUT
TT-01 Stimson Lumber Company
 10:00 a.m.–1:00 p.m.



SOLD OUT
TT-02 Kaiser Permanente Medical Center
 1:00 p.m.–5:00 p.m.

Individual must provide over-the-ankle boots or shoes.

Tuesday, May 17



SOLD OUT
TT-03 East Side Plating, Inc.
 9:30 a.m.–1:00 p.m.



SOLD OUT
TT-04 Intel Corporation
 1:30 p.m.–5:30 p.m.

Wednesday, May 18



SOLD OUT
TT-05 SolarWorld Industries of America
 9:30 a.m.–1:30 p.m.

CM Points . . .

Tours are included in the overall 1 CM point per day.



Need Assistance?

Staff holding “Ask Me” signs are positioned throughout the OCC, Saturday through Tuesday, to help registrants with directions and information. Don't be afraid to “Ask!”

+ Student and Young Member Activities

Future Leaders and Young Members Reception

(by invitation)
Sponsored by 3M



Sunday, May 15, 8:00 p.m.–11:00 p.m.
Spirit of 77

500 NE Martin Luther King Jr., Blvd.
(across from the Oregon Convention Center)
MAX Light Rail Stop: Rose Quarter or Convention Center

Have you been a part of the Future Leaders Institute? Are you a student member attending AIHce? If so, please join us for the Future Leaders and Young Member Reception. Socialize with peers and meet new people! *Admission by ticket.*

Students and Early Career Professionals Track

Sponsored by the Students and Early Career Professionals Committee, these sessions focus on topics relevant to those new to the profession. Learn practical tips for certification and transitioning from college to work.

RT 220 Perspectives on Preparation for the CIH Exam—Version 5.0

Tuesday, May 17, 10:30 a.m.–1:00 p.m.
OCC, D139

RT 237 Making Changes: Embracing an Uncertain Future and Thriving

Wednesday, May 18, 1:00 p.m.–3:30 p.m.
OCC, F152

Volunteer Collaboration Café

Sunday, May 15–Wednesday, May 18,
7:30 a.m.–5:00 p.m. + OCC, Lobby C

Need a place to relax for a few minutes? Visit the Collaboration Café—a multi-purpose area where you can unwind, network and attend complimentary special events.

CareerAdvantage Development Fair

Monday, May 16–Wednesday, May 18
OCC, Hall A

Sponsored by the AIHA Career and Employment Services Committee, this year's *Building Careers for Life* features sessions designed to help those in the field advance their current careers and find and maintain positions in the industry. The *CareerAdvantage* Development Fair also provides an opportunity for employers and OEHS professionals to mingle and make important contacts.

Student Lunch Discussions

Monday, May 16
12:30 p.m.–1:30 p.m. + OCC, Expo, Hall D

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! Purchase lunch and pick a topic. Seating is available first-come, first served.

Mentoring Happy Hour

Sponsored by the Students and Early Career Professionals (SECP) Committee

Monday, May 16, 5:00 p.m.–7:00 p.m.
Kells Irish Restaurant & Pub

112 SW 2nd Avenue
MAX Light Rail Stop: Skidmore Fountain

Are you interested in finding or being a mentor? Attendance is open to anyone who would like to come and learn about or join the mentoring program.

AIHF Fun Run/Walk 
Sponsored by Scott Safety

Tuesday, May 17, 6:30 a.m.

Ankeny Pavilion

MAX Light Rail Stop: Skidmore Fountain
\$40 per person/Member students no charge

Lace up your sneakers and support the work of the American Industrial Hygiene Foundation. This event is open to all from serious runners to recreational walkers. Member students are admitted at no charge (student badge required). All participants must check-in at the Social Tours / Run/Walk + Pin Counter in the Convention Center from Sunday, Noon until 5:30 p.m., on Monday. New registrants are also welcome. Walk-ins at the race site are not permitted.

21st Annual Student Poster Session

Wednesday, May 18
10:00 a.m.–Noon + OCC, Expo, Hall B

Students discuss their research; two posters will be selected “Best of Session.”

Student Local Sections Council Business Meeting

Tuesday, May 17
2:00 p.m.–4:00 p.m. + OCC, E142

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

Students and Early Career Professionals Committee Meeting

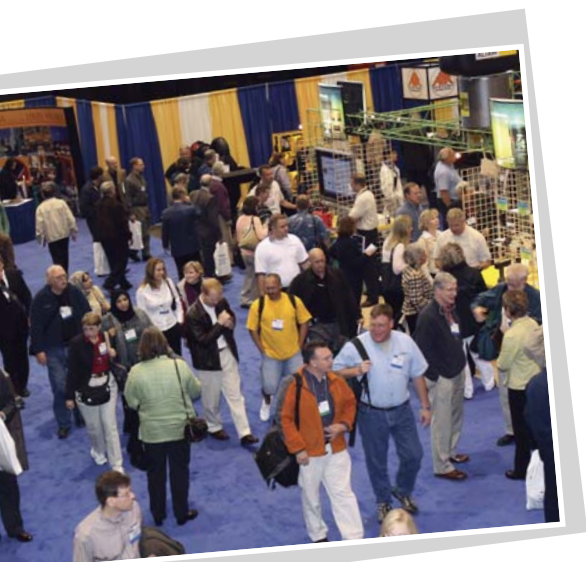
Thursday, May 19
8:00 a.m.–10:00 a.m. + OCC, E141

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, May 16–Wednesday, May 18

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.





CareerAdvantage Development Fair at AIHce 2011



Oregon Convention Center, Hall A

**Check out the popular learning events happening at
Development Fair 2011!**

Monday, May 16–Tuesday, May 17, 8:00 a.m.–4:00 p.m.

Wednesday, May 18, 9:00 a.m.–4:00 p.m.

Résumé Critiquing

Monday, May 16

8:00 a.m.–Noon and 2:30 p.m.–4:00 p.m.

Tuesday, May 17

8:00 a.m.–9:00 a.m. and 10:30 a.m.–Noon

Wednesday, May 18

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.

Seminar: You're Hired —The Do's and Don'ts of Job Interviews – Live Interview and Critique

Monday, May 16, 1:30 p.m.–2:30 p.m.

Mary Ellen Brennan, SPHR

William Nichols

Richard Prodans, CIH, CSP

Members of the Career and Employment Services Committee (CES) and the AIHA Human Resources Director will stage and manage several mock job interviews to give attendees the Do's and Don'ts of interviewing in today's professional workplace. The seminar will give attendees an interactive experience where they can observe and discuss interviewing styles and communication obstacles. Attendees will gain practical tools and relevant knowledge to use when looking for a new opportunity.

Seminar: Everyone Is a Consultant

Tuesday, May 17, 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.

Seminar: Bridging the Gap to Retirement

Tuesday, May 17, 1:30 p.m.–2:30 p.m.

John Henshaw, CIH

Meet John Henshaw, former Assistant Secretary of Labor OSHA, as he discusses "Bridging the Gap to Retirement." In his distinguished career, Mr. Henshaw has worked for a large multinational chemical and pharmaceutical corporation, provided direction to a government agency in transition, and now has established a consulting business. In this seminar, he will focus on building your career, choosing the right time to retire, planning for the future, and making the most of your skills. Mr. Henshaw will talk on preparing your career at age 60 — discussing what must be considered when making career decisions or deciding what to do next — you may want to pursue a new job, pursue a new interest or a different career, work part-time, teach your skills to others, or just enjoy your retirement.

Speed Networking

Tuesday, May 17, 3:00 p.m.–4:00 p.m.

Sponsored by the Career and Employment Services Committee

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.



CareerAdvantage

Building Careers for Life

Sponsored by the Career and Employment Services Committee

+ Volunteer Collaboration Café

See What's New—

Discover the Volunteer Collaboration Café

Convention Center, Lobby C

Explore our interactive volunteer display and learn how you can benefit from the dynamic AIHA® volunteer experience.

Sunday, May 15

7:30 a.m.–5:00 p.m.

Student Meet and Greet

3:00 p.m.–3:30 p.m.

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

Monday, May 16

Explore, Interact, and Learn—Investigate the Volunteer Collaboration Café

7:30 a.m.–5:00 p.m.

Daily special events will expand your volunteering horizon and provide opportunities to network with peers and staff.

General Session replayed throughout the day!

10:30 a.m.–11:00 a.m.

Student Exchange

A great opportunity to meet new friends.

11:00 a.m.–11:30 a.m.

Meet Your Sponsors—Student Local Sections and Local Sections

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

11:30 a.m.–Noon

Bring AIHA to Your Campus

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

12:30 p.m.–1:00 p.m.

Networked

Learn how to use and benefit from a social media presence online.

2:00 p.m.–3:00 p.m.

Remembering the Triangle Shirtwaist Factory Fire: 100 Years Later

View the “Triangle Fire” episode from the PBS series, “*American Experience*.” The Triangle Fire was the deadliest workplace accident in New York City’s history. A match dropped on the 8th floor of the factory sparked a fire that killed over 100 innocent people trapped inside. The private industry of the American factory would never be the same. *Hosted by AIHA’s Social Concerns Committee.*

3:30 p.m.–4:00 p.m.

Turning Your Technical Expertise into Publishable Materials

Learn how to satisfy that burning desire to see your name in print — write for AIHA publications.

4:30 p.m.

Raffle

Sign up for the daily raffle. The drawing takes place at 4:30 p.m.

Tuesday, May 17

Do You ♥ Volunteering?

7:30 a.m.–5:00 p.m.

Come see for yourself why so many of your peers volunteer. By joining them, you can make the most of your AIHA membership. Check out these special events.

General Session replayed throughout the day!

9:30 a.m.–10:30 a.m.

Remembering the Triangle Shirtwaist Factory Fire: 100 Years Later

View the “Triangle Fire” episode from the PBS series, “*American Experience*.” The Triangle Fire was the deadliest workplace accident in New York City’s history. A match dropped on the 8th floor of the factory sparked a fire that killed over 100 innocent people trapped inside. The private industry of the American factory would never be the same.

10:30 a.m.–11:00 a.m.

Ask the PCC Chair

Meet Maritza Adams, CSP, Chair, PCC. Find out about the AIHce Technical Program submission and peer review requirements.

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

Education Is Key to Maintaining an Edge

Discuss educational opportunities and professional development with AIHA Continuing Education Coordinator Jessica Pagel. Find out how you and your organization can benefit from educational options like on-site group training and road courses offered in the U.S. and abroad.

12:30 p.m.–1:00 p.m.

Explore Your Virtual Learning Options

AIHA Distance Learning Program Manager, Cinthia Minan, offers practical advice on how to maintain your certifications, train large groups or even present a course via any one of AIHA’s many virtual, web, and self-study formats.

1:00 p.m.–1:30 p.m.

AIHA’s Continuing Education Committee (CEC)—Delivering Quality Educational Options

Ever wonder about the role of the CEC or how you can get involved? Join members of the CEC at the café to discuss how they shape OEHS education. Learn about their goal to deliver practical skills and tools that enhance technical competence, as well as the overall profession, through traditional and non-traditional education formats.

2:00 p.m.–2:30 p.m.

Meet Your Neighbors: Local Section Interactions

Network and collaborate with members from other AIHA local sections.

3:00 p.m.–3:30 p.m.

Networked

Learn how to use and benefit from a social media presence online.

4:30 p.m.

Raffle

Visit the café and sign up for the daily raffle. The drawing takes place at 4:30 p.m.

Wednesday, May 18

Be Seen, Be Heard—Before It's Too Late

7:30 a.m.–5:00 p.m.

Take advantage of this last opportunity to network with peers and share your ideas!

General Session replayed throughout the day!

10:30 a.m.–11:30 a.m.

Remembering the Triangle Shirtwaist Factory Fire: 100 Years Later

View the “Triangle Fire” episode from the PBS series, “American Experience.” The Triangle Fire was the deadliest workplace accident in New York City’s history. A match dropped on the 8th floor of the factory sparked a fire that killed over 100 innocent people trapped inside. The private industry of the American factory would never be the same.

1:00 p.m.–1:30 p.m.

Student Exchange

Meet other student members and exchange contact information, before it’s too late.

2:00 p.m.–2:30 p.m.

Learning about AIHF Scholarships

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

3:00 p.m.–3:30 p.m.

Giving Back—Mentoring Program

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

4:30 p.m.

Raffle

Visit the café and sign up for the daily raffle. The drawing takes place at 4:30 p.m.

**Daily events are subject to change*

AIHA2011

ASIA PACIFIC OH + EHS Conference + Exhibition
Singapore • 11–13 October, 2011 • www.aihaap.org



INAUGURAL EVENT!

For the first time, AIHA is bringing quality programming to the Asia Pacific region. Programme highlights include:

- Top quality speakers from global companies like Reliance, ITT, ExxonMobil, 3M, GE, and many more.
- Three professional development courses on Noise, Exposure Assessment, and Value Strategy
- Two tracks: a Management Track on Stewardship and Sustainability; and a Technical Track
- An Exhibition, lunches, receptions, and many opportunities for networking

You won't want to miss this exciting new event!

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+ Board and Volunteer Group Activities

AIHA*

Academic Accreditation Committee Meeting

Sunday, May 15, 6:00 p.m.–10:00 p.m., Hilton, Executive Suite

Academic SIG Meeting

Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E141

Academy Conference Team Meeting

Monday, May 16, 12:30 p.m.–1:30 p.m., OCC, VIP Suite D

Academy of Industrial Hygiene Meeting

Saturday, May 14, 9:00 a.m.–5:00 p.m., Hilton, Studio Suite

Aerosol Technology Committee Meeting

Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E143

Accredited Laboratory Forum

Sunday, May 15, 5:30 p.m.–7:30 p.m., Portland, 252

AIHce Exhibitor Advisory Group Meeting

Tuesday, May 17, 3:00 p.m.–4:00 p.m., OCC, VIP Suite D

Annual Business Meeting

Thursday, May 19, 8:30 a.m.–10:30 a.m., OCC, C126

Analytical Accreditation Board Meeting

Saturday, May 14, 9:00 a.m.–5:00 p.m., Hilton, Alexanders, 23rd Floor

ANSI/AIHA ASC Officers Meeting

Wednesday, May 18, 10:00 a.m.–11:00 a.m., OCC, VIP Suite D

ANSI/AIHA Z9.12 Subcommittee Meeting

Tuesday, May 17, 8:00 a.m.–11:00 a.m., OCC, D131

ANSI/AIHA Z10 Occupation Health and Safety Management System Standard Meeting

Thursday, May 19, 8:00 a.m.–5:00 p.m., Hilton, Salon, Executive Tower and

Friday, May 20, 8:00 a.m.–Noon, Hilton, Broadway II

ANSI/AIHA Z88 Respiratory Protection Standards Committee Meeting

Wednesday, May 18, 4:00 p.m.–6:00 p.m., OCC, E148

ANSI/AIHA Z88.12 Subcommittee Meeting

Monday, May 16, 7:30 a.m.–9:30 a.m., OCC, E147

ANSI/AIHA Z9 Ventilation System Standards Committee Meeting

Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E143

BEEL Committee Meeting

Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E143

Biological Monitoring Committee Meeting

Monday, May 16, 1:30 p.m.–3:30 p.m., OCC, E143

Biosafety and Environmental Microbiology Committee Meeting

Monday, May 16, 10:00 a.m.–Noon, OCC, E146

Blue Council Meeting

Tuesday, May 17, Noon–1:00 p.m., OCC, E144

Board of Directors Meeting

Sunday, May 15, 8:00 a.m.–4:30 p.m., The Nines, Gallery

Board of Directors Meeting

Thursday, May 19, 11:30 a.m.–4:30 p.m., The Nines, Design

Career and Employment Services Committee Meeting

Wednesday, May 18, 7:00 a.m.–9:00 a.m., OCC, E144

Clandestine Laboratory Working Group Meeting

Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E141

Communication and Training Methods Committee Meeting

Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E141

Computer Applications Committee Meeting

Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E143

Confined Spaces Committee Meeting

Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E143

Construction Committee Meeting

Wednesday, May 18, 9:30 a.m.–12:30 p.m., OCC, E146

Consultants SIG Business Meeting

Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E144

Continuing Education Committee Meeting

Monday, May 16, 2:00 p.m.–6:00 p.m., Hilton, Forum Suite

Control Banding Working Group Meeting

Wednesday, May 18, 3:30 p.m.–5:30 p.m., OCC, E144

Dermal Project Team Meeting

Tuesday, May 17, 9:00 a.m.–10:00 a.m.–OCC, E148

Engineering Committee Meeting

Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E143

Engineering Industry SIG Meeting

Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E147

Environmental Issues Committee Meeting

Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E142

Environmental Issues SIG Meeting

Wednesday, May 18, 3:30 p.m.–5:30 p.m., OCC, E147

Ergonomics Committee Meeting

Wednesday, May 18, 3:30 p.m.–5:30 p.m., OCC, E146

Exposure Assessment Committee Roundtable Meeting

Tuesday, May 17, 8:30 a.m.–9:30 a.m., OCC, E145

Exposure Assessment Strategies Committee Meeting

Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E145

Fellows SIG Meeting

Wednesday, May 18, 4:00 p.m.–6:00 p.m., Hilton, Grand Ballroom II

Finance Committee Meeting

Monday, May 16, 2:00 p.m.–4:30 p.m., OCC, VIP Suite D

Future Leaders and Young Members Reception (by invitation)

Sunday, May 15, 8:00 p.m.–11:00 p.m., Spirit of 77, 500 NE MLK Jr., Blvd.

Government Affairs Update

Tuesday, May 17, 2:30 p.m.–3:00 p.m., OCC, D133

Green Building Working Group Meeting

Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E145

Green Council Meeting

Tuesday, May 17, Noon–1:00 p.m., OCC, E142

Healthcare Working Group Meeting

Wednesday, May 18, 9:30 a.m.–11:30 a.m., OCC, E141

Incident Preparedness and Response Working Group Meeting

Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E148

Indigo Council Meeting

Tuesday, May 17, Noon–1:00 p.m., OCC, E148

Indoor Environmental Quality Committee Meeting

Wednesday, May 18, 9:30 a.m.–11:30 a.m., OCC, E145

Indoor Environmental Quality SIG Meeting

Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E147

International Affairs Committee Meeting

Monday, May 16, 2:00 p.m.–6:00 p.m., Hilton, Galleria South

International Reception (by invitation)

Monday, May 16, 6:30 p.m.–8:00 p.m., Hilton, Grand Ballroom I

International Training/Qualifications in OH Meeting

Monday, May 16, 3:00 p.m.–5:00 p.m., OCC, C126

Ionizing Radiation Committee Meeting

Monday, May 16, 1:00 p.m.–3:00 p.m., OCC, E148

Joint Industrial Hygiene Ethics Education Committee Meeting

Sunday, May 15, 4:00 p.m.–6:00 p.m., Hilton, Boardroom East

Laboratory Health and Safety Committee Meeting

Tuesday, May 17, 1:00 p.m.–3:00 p.m., OCC, E146

Law Committee Meeting

Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E148

Management Committee Meeting

Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E141

Membership Committee Meeting

Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E144

Minority SIG Meeting

Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E147

MSA/AIHA Reception

Tuesday, May 17, 6:30 p.m.–7:30 p.m., Hilton, Grand Ballroom

Nanotechnology Working Group Meeting

Tuesday, May 17, 3:30 p.m.–5:30 p.m., OCC, E146

Noise Committee Meeting

Wednesday, May 18, 1:00 p.m.–3:00 p.m., OCC, E146

Nonionizing Radiation Committee Meeting

Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E141

Occupational and Environmental Medicine Committee Meeting

Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E147

Occupational Epidemiology Committee Meeting

Monday, May 16, 10:00 a.m.–Noon, OCC, E141

Orange Council Meeting

Monday, May 16, Noon–1:00 p.m., OCC, E144

Past Presidents' Brunch (by invitation)

Wednesday, May 18, 9:30 a.m.–11:00 a.m., The Nines, Georgian Room

President's Reception (by invitation)

Wednesday, May 18, 6:30 p.m.–8:00 p.m., The Nines, Ballroom

PCIH–Risk Assessment Symposium Task Force Meeting

Wednesday, May 18, 1:30 p.m.–3:00 p.m., OCC, E142

Permanent Conference Committee Meeting

Wednesday, May 18, 4:00 p.m.–6:00 p.m., OCC, E143

Pharmaceutical Round Robin Committee Meeting

Wednesday, May 18, 8:00 a.m.–9:30 a.m., OCC, E143

Practice, Standards and Guidelines Committee Meeting

Tuesday, May 17, 10:00 a.m.–Noon, OCC, E147

Protective Clothing and Equipment Committee Meeting

Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E142

Publications Committee Meeting

Tuesday, May 17, 9:30 a.m.–11:30 a.m., OCC, E144

Real-Time Detection Systems Committee Meeting

Monday, May 16, 1:00 p.m.–3:00 p.m., OCC, E146

Red Council Meeting

Monday, May 16, Noon–1:00 p.m., OCC, E142

Respiratory Protection Committee Meeting

Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E142

Risk Assessment Committee Meeting

Monday, May 16, 1:00 p.m.–3:00 p.m., OCC, E141

Safety Committee Meeting

Monday, May 16, 3:30 p.m.–5:30 p.m., OCC, E144

Sampling and Laboratory Analysis Committee Meeting

Tuesday, May 17, 1:30 p.m.–3:30 p.m., OCC, E144

Saturday PDC Monitors Meeting

Saturday, May 14, 7:00 a.m.–8:00 a.m., OCC, C124

Social Concerns Committee Meeting

Monday, May 16, 3:30 p.m.–6:30 p.m., OCC, E148

Stewardship and Sustainability Committee Meeting

Monday, May 16, 9:30 a.m.–11:30 a.m., OCC, E145

Sunday PDC Monitors Meeting

Sunday, May 15, 7:00 a.m.–8:00 a.m., OCC, C124

Toxicology Committee Meeting

Monday, May 16, 10:00 a.m.–Noon, OCC, E148

Value Strategy Project Team Meeting

Tuesday, May 17, 4:00 p.m.–6:00 p.m., Hilton, Forum Suite

Violet Council Meeting

Wednesday, May 18, Noon–1:00 p.m., OCC, E142

Volunteer Group Chairs Meeting

Thursday, May 19, 8:00 a.m.–10:00 a.m., OCC, E145

Volunteer Group Secretaries Orientation Meeting

Thursday, May 19, 10:00 a.m.–Noon, OCC, E145

Volunteer Groups' Joint Meeting

Monday, May 16, 6:30 a.m.–7:45 a.m., OCC, Oregon Ballroom

Volunteer Groups' Joint Meeting

Tuesday, May 17, 6:30 a.m.–7:45 a.m., OCC, Oregon Ballroom

Volunteer Recognition Reception (by invitation)

Monday, May 16, 7:30 p.m.–9:00 p.m., Hilton, Pavilion Ballroom

WEEL Committee Meeting

Thursday, May 19, 8:00 a.m.–5:00 p.m., Hilton, Directors Suite

Yellow Council Meeting

Monday, May 16, Noon–1:00 p.m., OCC, E143

AIHA Local Sections**Local Section Council Business Meeting**

Tuesday, May 17, 4:00 p.m.–6:00 p.m., OCC, E145

Local Sections Officers Training

Thursday, May 19, 10:00 a.m.–Noon, OCC, E146

Student Local Sections Council Business Meeting

Tuesday, May 17, 2:00 p.m.–4:00 p.m., OCC, E142

AIHA Student and Early Career Professionals**Student and Early Career Professionals Committee Meeting**

Thursday, May 19, 8:00 a.m.–10:00 a.m., OCC, E141

Students and Early Career Professionals Committee Mentoring Happy Hour

Monday, May 16, 5:00 p.m.–7:00 p.m., Kells Irish Restaurant & Pub, 112 SW 2nd Avenue

Student Local Sections Council Business Meeting

Tuesday, May 17, 2:00 p.m.–4:00 p.m., OCC, E142

AIHF**Board of Trustees Meeting**

Tuesday, May 17, 3:30 p.m.–5:30 p.m., Hilton, Council Suite

JOEH**Editorial Review Board Meeting**

Sunday, May 15, 7:00 p.m.–9:00 p.m., Hilton, Forum Suite

JOEH LLC Board Meeting

Tuesday, May 17, 4:00 p.m.–6:00 p.m., Hilton, Cabinet Suite

ACGIH®**Board of Directors Meeting**

Sunday, May 15, 8:00 a.m.–3:00 p.m., Hilton, Directors Suite

FOHS Board of Trustees Meeting

Monday, May 16, 10:30 a.m.–Noon, OCC, VIP Suite D

Membership Reception and Annual Meeting of the Membership

Sunday, May 15, 6:00 p.m.–7:30 p.m., Hilton, Grand Ballroom II

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+ At-a-Glance: Friday and Saturday

Friday, May 13

8:30 a.m.-5:00 p.m.

P001 Certified Safety Professional (CSP)
Exam Preparation Workshop
Hilton, Pavilion, Ballroom East

8:30 a.m.-5:30 p.m.

P002 Essentials of Hazardous Materials
Management (EHMM). A Preparatory
Course for the CHMM Exam
Hilton, Parlor

4:00 p.m.-6:00 p.m.

Registration and Hotel Reservations
OCC, Lobby A

Saturday, May 14

7:00 a.m.-8:00 a.m.

Saturday PDC Monitors Meeting
OCC, C124

7:00 a.m.-5:30 p.m.

Registration and Hotel Reservations
OCC, Lobby A

7:30 a.m.-5:30 p.m.

Speaker Ready Room
OCC, C124

8:00 a.m.-5:00 p.m.

PDC 101 Anticipation, Recognition,
Evaluation and Control of Welding Health
Hazards
OCC, D136

PDC 102 Bayesian Statistics: Overview and
Applications in IH Data Interpretation and
Exposure Risk Assessment
OCC, F150

PDC 103 EHS Management Systems 101
OCC, D133

PDC 104 Ergonomics Toolkit: Basic
Application of Common Ergonomic
Assessment Tools
OCC, D137

PDC 105 Fundamentals of Nonionizing
Radiation
OCC, A105

PDC 106 GHS: The New Hazard
Communication
OCC, A106

PDC 107 If I'm Teaching, Why Aren't They
Learning? How to Provide World Class
Training That Works
OCC, D131

PDC 108 Implementing a Combustible Dust
Program
OCC, E145

PDC 110 Investigative Photography
OCC, A103

PDC 111 Mold Recognition, Effective
Sampling Strategies and Results
Interpretation
OCC, E148

PDC 112 Practical Applications for Portable
Radiation Instruments
OCC, D138

PDC 113 Surface Sampling for Metals:
Issues, Methods, and Strategy
OCC, D139

PDC 114 Taking the LEED: Putting the
Human Element Back into Green Building
OCC, A108

PDC 115 The Derivation of Occupational
Exposure Levels
OCC, B111

PDC 116 Topics in Product Stewardship:
Chemical and Consumer Products Risk
Management
OCC, F149

PDC 117 Toxicology of Chemical Agents
That Could Put You on the TSA No Fly List
OCC, B117

PDC 118 Vapor Intrusion Investigation and
Mitigation: Advances in Assessment and
Practice
OCC, D135

8:30 a.m.-12:30 p.m.

PDC 201 Scanning for Safety: How to
Recognize Hazards in the Workplace
OCC, C126

PDC 202 Worker Fatigue Risk Management:
Applying New Standards to Improve H&S
OCC, C120

Note Meeting Rooms . . .

OCC = Oregon Convention Center

8:30 a.m.-5:00 p.m.

P001 Certified Safety Professional (CSP)
Exam Preparation Workshop
Hilton, Pavilion, Ballroom East

8:30 a.m.-5:30 p.m.

P002 Essentials of Hazardous Materials
Management (EHMM). A Preparatory
Course for the CHMM Exam
Hilton, Parlor

P003 Management Certificate Course II:
Action Tools for Successful OEHS
Management and Leadership
OCC, B118

PDC 701 Basic Electrical Safety with
Application of NFPA 70E
OCC, B115

PDC 702 Construction Hazard Recognition
and Control
OCC, B114

PDC 703 Exposure Assessment Strategies and
Statistics
OCC, B113

PDC 707 Professional Judgment in Exposure
Assessment Decision-making
OCC, B112

PDC 709 Using Mathematical Models to
Estimate Exposures
OCC, B116

1:30 p.m.-5:30 p.m.

PDC 301 Ergo 101
OCC, C126

PDC 302 Introduction to EHS for the
Nanotechnology Industry
OCC, C120

AIHA

9:00 a.m.-5:00 p.m.

Academy of Industrial Hygiene Meeting
Hilton, Studio Suite

Analytical Accreditation Board Meeting
Hilton, Alexanders, 23rd Floor

+ At-a-Glance: Sunday

Sunday, May 15

7:00 a.m.-8:00 a.m.

Sunday PDC Monitors Meeting
OCC, C124

7:00 a.m.-5:30 p.m.

Registration and Hotel Reservations
OCC, Lobby A

7:30 a.m.-5:00 p.m.

Volunteer Collaboration Café
OCC, Lobby C

7:30 a.m.-5:30 p.m.

Speaker Ready Room
OCC, C124

8:00 a.m.-5:00 p.m.

SYM010 Symposium: Conquering Industrial Hygiene Problems with the Use of Real-Time Monitors
OCC, Portland 252

PDC 401 Methods and Applications for Exposure Assessment Chemical Detection in Real Time
OCC, D136

PDC 402 Application of Advanced Ergonomic Assessment Tools in the Ergonomic Toolkit
OCC, A108

PDC 403 Applying and Implementing Real World Health Hazard and Control Banding Strategies
OCC, B111

PDC 404 Applying Business Skills for Presentations to Executive Management
OCC, E144

PDC 406 Beryllium Worker Protection: A Model for Success
OCC, F149

PDC 407 Biological Monitoring: A "How To" Guide and Case Studies
OCC, E142

PDC 408 Biosafety 2: Advanced Biohazard Control Concepts
OCC, E148

PDC 410 Clandestine Drug Labs: H&S Aspects in First Response, Assessment, and Remediation
OCC, D139

PDC 411 Engineering Controls to Minimize Fugitive Dusts
OCC, E145

PDC 412 Environmental Law and Regulations for IHs
OCC, F150

PDC 413 Ethical Fitness: Choosing Between Right vs. Right
OCC, C120

PDC 414 Exceptional Functional Leadership
OCC, A106

PDC 415 GHS for the IH and Safety Practitioner: how to prepare your company for the GHS
OCC, A105

PDC 416 Introduction to Industrial Toxicology
OCC, F151

PDC 417 Introduction to the Value Strategy: A Process for Promoting H&S Interventions
OCC, E146

PDC 418 Life Safety Engineering
OCC, D133

PDC 419 Managing Radiation Safety Programs for IHs
OCC, D138

PDC 420 Noise Control Engineering
OCC, D135

PDC 421 REACH: A Risk Management Strategy
OCC, D137

PDC 422 Risk Reduction Methods and Strategies for OSH Professionals
OCC, F152

PDC 423 Virtual Training: Have a Blast Without Breaking the Bank
OCC, E141

PDC 424 Wellness and Health Education: Making the Connection Between IH and Worker Health
OCC, D131

PDC 425 Setting OELs for Hydrocarbon Solvents: The Value and Use of RCP and GGVs
OCC, B117

PDC 426 Writing Effective IH Reports
OCC, E143

PDC 427 Introduction to Risk Assessment for the IH
OCC, A103

PDC 428 Ramping Up Your Hearing Protection and Jazzing Up Your Hearing Conservation
OCC, C126

8:30 a.m.12:30 p.m.

PDC 501 Environmental Health and Safety in the European Union
Hilton, Broadway III

PDC 502 Exposure Assessment Using Whole Air Sampling Methods
Hilton, Broadway II

PDC 503 Managing Nanomaterial Hazards for EHS Professionals
Hilton, Salon, Executive Tower

PDC 504 Particle Size-Selective (Inhalable, Thoracic and Respirable) Aerosol Sampling
Hilton, Galleria South

8:30 a.m.-4:00 p.m.

P002 Essentials of Hazardous Materials Management (EHMM). A Preparatory Course for the CHMM Exam
Hilton, Parlor

8:30 a.m.-5:00 p.m.

P001 Certified Safety Professional (CSP) Exam Preparation Workshop
Hilton, Pavilion Ballroom West

8:30 a.m.-5:30 p.m.

P003 Management Certificate Course II: Action Tools for Successful OEHS Management and Leadership
OCC, B118

PDC 701 Basic Electrical Safety with Application of NFPA 70E
OCC, B115

PDC 702 Construction Hazard Recognition and Control
OCC, B114

PDC 703 Exposure Assessment Strategies and Statistics
OCC, B113

PDC 707 Professional Judgment in Exposure Assessment Decision-making
OCC, B112

PDC 709 Using Mathematical Models to Estimate Exposures
OCC, B116

1:30 p.m.-5:30 p.m.

PDC 601 Analysis of Force Patterns for Preventing Fatigue and Musculoskeletal Disorders

Hilton, Broadway II

PDC 602 IHs as Expert Witnesses: Anatomy and Physiology of a Civil Law Suit

Hilton, Salon, Executive Tower

PDC 603 Smart Devices and the EHS Professional

Hilton, Broadway III

ACGIH®

8:00 a.m.-3:00 p.m.

Board of Directors Meeting

Hilton, Directors Suite

6:00 p.m.-7:30 p.m.

ACGIH Membership Reception and Annual Meeting of the Membership

Hilton, Grand Ballroom 2

AIHA®

8:00 a.m.-4:30 p.m.

Board of Directors Meeting

The Nines, Gallery

4:00 p.m.-6:00 p.m.

Joint Industrial Hygiene Ethics Education Committee Meeting

Hilton, Boardroom East

5:30 p.m.-7:30 p.m.

AIHA Accredited Laboratory Forum

Portland, 252

6:00 p.m.-10:00 p.m.

Academic Accreditation Committee Meeting

Hilton, Executive Suite

8:00 p.m.-11:00 p.m.

Future Leaders and Young Members Reception (by invitation)

Spirit of 77, 500 NE MLK Jr., Blvd.

Note Meeting Rooms . . .

OCC = Oregon Convention Center

JOEH

7:00 p.m.-9:00 p.m.

JOEH Editorial Review Board Meeting

Hilton, Forum Suite

Ancillary

7:30 a.m.-5:00 p.m.

ABIH Board Meeting

Hilton, Studio Suite

8:00 a.m.-5:00 p.m.

Board of Certification in Professional Ergonomics (BCPE) Certification Examination

Hilton, Executive Suite

AIHce 2011 Blood Drive

Monday, May 16
10:00 a.m.-3:00 p.m.

**The need is constant.
The gratification is instant.
Give Blood.**



American Red Cross

redcrossblood.org | 1-800-RED CROSS
(1-800-733-2767)

Identification required.

All donors automatically entered into a drawing for cash prizes of \$250, \$150 and \$100.

Swipe your Expocard at the door. Winners will be notified by email on Tuesday.

It's all happening at AIHA's InfoCentral!

Take advantage of 15% off all AIHA publications and education, and enjoy free shipping for AIHA members. Check out these new titles that are debuting at AIHce:

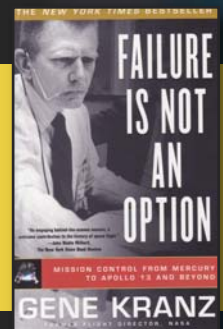
- The Occupational Environment: Its Evaluation, Control, and Management, 3rd edition
- Industrial Hygiene Reference & Study Guide, 3rd edition
- Laboratory Quality Assurance Manual, 4th edition
- 2011 ERPG/WEEL Handbook and Update Sets
- Monitoring for Health Hazards at Work, 4th edition

More!

View the newly updated www.aiha.org, and get information about membership, upcoming events and other AIHA products and services from AIHA Staff.

Special book signing event!

Following the Opening Session, Gene Kranz will be signing his book, *Failure Is Not an Option: Mission Control From Mercury to Apollo 13 and Beyond*, on Monday at 10 a.m.



Visit AIHA's InfoCentral at booth # 913
for special events, giveaways, hot new products and much more!
It's the place to be!

AIHA Publications —
Reliable References for OEHS Professionals Globally

 **AIHA**[®]
Protecting Worker Health

Get the training the workplace demands...

- Occupational Hygiene
- Environmental Risk Assessment
- Risk Management

The Department of Environmental Health Sciences offers a flexible, *Part-time/Internet-based* Master of Science in **Public Health (MSPH) in Occupational & Environmental Hygiene** and a graduate **Certificate in Environmental & Occupational Health**.



JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH



For more information, stop by booth #2154 or visit: www.jhsph.edu/dept/ehs

+ At-a-Glance: Monday

Monday, May 16

7:00 a.m.-5:30 p.m.

Registration and Hotel Reservations
OCC, Lobby A

7:30 a.m.-5:00 p.m.

Press Room
OCC, D132

Volunteer Collaboration Café

OCC, Lobby C

7:30 a.m.-5:30 p.m.

Speaker Ready Room
OCC, C124

8:00 a.m.-9:30 a.m.



**Opening General Session:
Failure Is Not an Option**
Gene Kranz, NASA Flight Control Director and Presidential Medal of Freedom Recipient
Houston, TX

OCC, Portland Ballroom

8:00 a.m.-4:00 p.m.

AIHA *Career Advantage* Development Fair 2011
OCC, Hall A

9:00 a.m.-5:30 p.m.

Visit the Expo!

OCC, Halls B-E

*Daily Prizes, Special Displays,
Cyber/Message 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

OCC, 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.

10:00 a.m.-11:30 a.m.

Welcome to Portland Brunch
(Admission by ticket)

Hilton, Alexanders, 23rd Floor

10:00 a.m.-1:00 p.m.

TT-01 Stimson Lumber Company

*OCC, Bus departs MLK entrance; board by
9:45 a.m.*

10:00 a.m.-2:00 p.m.

Exhibitor Product Demos and Presentations

Expo Theater, Hall D

*See presentation descriptions on pages 36
and 41*

10:00 a.m.-3:00 p.m.

Blood Drive
OCC, A103

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

CR 301 Changing a Safety Culture: How
Leadership and Front-Line Think
OCC, D136

CR 302 Conflict Management and
Resolution for Safety Professionals
OCC, D138

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

PO 105 Laboratory Health and Safety
OCC, B119

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

Late Breaking: Nuclear Emergency in Japan -
Physics and Hazards
OCC, F149

PO 101 Asbestos Exposure Assessment
Strategies
OCC, A108

PO 102 Ergonomics: Shoulders, Back and
Lower Extremities
OCC, B110

PO 103 Exposure Modeling Strategies
OCC, Oregon 203

PO 104 Noise Protection, Training,
Measurement and Reduction
OCC, Oregon 202

RT 201 Case Studies on Nonionizing
Radiation
OCC, F152

RT 202 Essential Hazardous Materials and
Emergency Response Resources and Tools for
the IH
OCC, B116

RT 203 Managing Moisture on Construction
Sites
OCC, A106

RT 204 Taking the Mystery Out of Mentoring:
Practical Tools to Make a Real Difference
OCC, C121

RT 205 U.S. Chemical and Occupational
Health Regulation and Policy for Engineered
Nanomaterials
OCC, Oregon 201

10:30 a.m.-1:00 p.m.

RT 206 AIHA* Value Strategy Session on
Case Studies
OCC, B113

11:30 a.m.-12:30 p.m.

CR 303 Dust Explosion Hazard Assessment--
Including OSHA Combustible Dust
National Emphasis Program
OCC, Oregon 204

12:30 p.m.-1:30 p.m.

Luncheon Discussions—Students and Early
Career Professionals
OCC, Expo, Hall D

12:30 p.m.-2:00 p.m.

Unsolved IH Mysteries Workshop
OCC, D133

12:30 p.m.-4:30 p.m.

ST-01 Portland Highlights

Depart the OCC MLK Lobby at 12:15 p.m.
and the Hilton, 6th St., at 12:30 p.m.

1:00 p.m.-2:00 p.m.

Jeffrey S. Lee Lecture
OCC, Oregon 202

1:00 p.m.-5:00 p.m.

TT-02 Kaiser Permanente Medical Center
*OCC, Bus departs MLK entrance; board by
12:45 p.m.*

2:00 p.m.-3:00 p.m.

CR 304 Using ISO Life Cycle Assessment
Standards
OCC, B110

CR 305 Consumer Product Toxicology
OCC, B119

2:00 p.m.-4:20 p.m.

PO 106 Biosafety and Environmental
Microbiology I: Allergens, Fungi, and IEQ--
What's New?
OCC, A106

2:00 p.m.-4:30 p.m.

RT 207 Defining and Evaluating Data
Quality
OCC, B116

2:00 p.m.-4:40 p.m.

PO 107 Engineering and Control Technology
OCC, D138

PO 108 General Topics in Occupational
Safety
OCC, D139

2:00 p.m.-5:00 p.m.

PO 109 Risk Assessment Case Studies
OCC, D136

PO 110 Management and Training Issues:
Communication
OCC, A108

RT 208 Building a Green Laboratory in the
21st Century
OCC, C121

RT 209 Environmental Noise: 35 Years and
Counting--Implications for Industrial
Hygiene
OCC, F152

RT 210 Living with Differences: Addressing Standards for Respirator Selection/Use Worldwide

OCC, F149

2:00 p.m.-6:00 p.m.

RT 211 Glen Williamson Forum: OSHA's Most Interesting Health Cases, 2008-2010

OCC, Oregon 201

RT 212 Nanotechnology: Advances in Medical Surveillance and Occupational Health

OCC, Oregon 203

RT 213 Occupational Exposure Limits: Global and Domestic Perspectives from Across the Field

OCC, Oregon 204

RT 214 OSHA's Injury and Illness Prevention Program Rulemaking

OCC, B113

2:30 p.m.-5:30 p.m.

SS 001 Science Symposium: Inhalable Particles--The State of the Science on a Big Particle Problem

OCC, Oregon 202

3:30 p.m.-4:30 p.m.

CR 306 Emergency Management and EHS: We've Come a Long Way in 10 Years

OCC, B110

CR 307 Overview of Recent Substantive Federal Environmental, Health, and Safety Rulemaking

OCC, B119

4:00 p.m.-5:30 p.m.

Expo Opening Cocktail Reception

OCC, Expo, Hall B-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®.

4:00 p.m.-8:00 p.m.

ST-02 MicroBrew Hop

Depart the OCC MLK Lobby at 3:45 p.m. and the Hilton, 6th St., at 4:00 p.m.

ACGIH®

10:30 a.m.-Noon

FOHS Board of Trustees Meeting

OCC, VIP Suite D

Note Meeting Rooms . . .

OCC = Oregon Convention Center

AIHA®

6:30 a.m.-7:45 a.m.

Volunteer Groups' Joint Meeting

OCC, Oregon Ballroom

7:30 a.m.-9:30 a.m.

ANSI/AIHA Z88.12 Subcommittee Meeting

OCC, E147

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

Confined Spaces Committee, Meeting

OCC, E143

Membership Committee Meeting

OCC, E144

Respiratory Protection Committee Meeting

OCC, E142

Stewardship and Sustainability Committee Meeting

OCC, E145

10:00 a.m.-Noon

Biosafety and Environmental Microbiology

Committee Meeting

OCC, E146

Occupational Epidemiology Committee Meeting

OCC, E141

Toxicology Committee Meeting

OCC, E148

Noon-1:00 p.m.

Orange Council Meeting

OCC, E144

Red Council Meeting

OCC, E142

Yellow Council Meeting

OCC, E143

12:30 p.m.-1:30 p.m.

Academy Conference Team Meeting

OCC, VIP Suite D

1:00 p.m.-3:00 p.m.

Ionizing Radiation Committee Meeting

OCC, E148

Real-Time Detection Systems Committee Meeting

OCC, E146

Risk Assessment Committee Meeting

OCC, E141

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

Biological Monitoring Committee Meeting

OCC, E143

2:00 p.m.-4:30 p.m.

Finance Committee Meeting

OCC, VIP Suite D

2:00 p.m.-6:00 p.m.

Continuing Education Committee Meeting

Hilton, Forum Suite

International Affairs Committee Meeting

Hilton, Galleria South

3:00 p.m.-5:00 p.m.

International Training/Qualifications in OH Meeting

OCC, C126

3:30 p.m.-5:30 p.m.

BEEL Committee Meeting

OCC, E143

Nonionizing Radiation Committee Meeting

OCC, E141

Occupational and Environmental Medicine Committee Meeting

OCC, E147

Protective Clothing and Equipment Committee Meeting

OCC, E142

Safety Committee Meeting

OCC, E144

3:30 p.m.-6:30 p.m.

Social Concerns Committee Meeting

OCC, E148

5:00 p.m.-7:00 p.m.

Students and Early Career Professionals

Committee Mentoring Happy Hour

Kells Irish Pub, 112 SW 2nd Avenue

6:30 p.m.-8:00 p.m.

International Reception (by invitation)

Hilton, Grand Ballroom I

7:30 p.m.-9:00 p.m.

Volunteer Recognition Reception

(by invitation)

Hilton, Pavilion Ballroom

Ancillary

5:00 p.m.-9:00 p.m.

Department of Energy (DOE) and DOE

Contractor Industrial Hygiene Meeting

Doubletree, Alaska

6:00 p.m.-8:00 p.m.

EMSL Customer Appreciation Cocktail Party

(by invitation only)

Hilton, Galleria North

Harvard Alumni Reception

Hilton, Directors Suite

6:30 p.m.-8:00 p.m.

Johns Hopkins Reception

Hilton, Broadway

+ Technical Program: Monday

OPENING GENERAL SESSION



8:00 a.m.–9:30 a.m.
OCC, Portland Ballroom

Failure Is Not an Option

Gene Kranz

NASA Flight Control Director and
Presidential Medal of Freedom
Recipient
Houston, TX

Gene Kranz is best known as the leader of the “Tiger Team” of flight directors who brought the Apollo

13 spacecraft and its crew of three astronauts back to Earth on April 17, 1970, after its oxygen system failed.

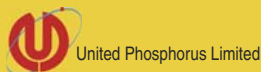
The hit film *Apollo 13* chronicles Kranz’s extraordinary struggle to improvise and devise a rescue plan under a scenario of extreme time pressure, many unknowns, and no real precedents. A *New York Times* best-selling author, Kranz’s book *Failure is Not an Option* chronicles his work in NASA’s Mission Control from Project Mercury through Apollo 13 and beyond.

Kranz served as flight director for the 33 missions of Projects Gemini, Apollo, and Skylab and led the flight control team during its first lunar landing. For demonstrating extraordinary courage and heroism, he was co-recipient of the Presidential Medal of Freedom awarded by President Nixon for the Apollo Mission and was designated a Distinguished Member of the Senior Executive Service by President Reagan.

After 37 years of service at NASA and in the Air Force, Kranz retired, keeping very busy with consulting and speaking to professional, civic, and youth groups. He built an aerobatic biplane and serves as flight engineer on a B-17 “Flying Fortress” performing at air shows throughout the United States.

From 10:00 a.m.–11:00 a.m., Mr. Kranz will be available in the AIHA booth to sign copies of his book, *Failure is Not an Option: Mission Control from Mercury to Apollo 13*.

This opening session is sponsored by



Exhibitor Product Demos and Presentations

10:00 a.m.–1:00 p.m. + Expo Theater, Hall D

10:00 a.m.

A New Passive Sampler for Low Level VOC Measurements, SKC

SKC will demonstrate a new passive sampler designed for ppb level measurements of organic vapors. The new Ultra III features significant design improvements over previous models. A slide cover enhances ease of use, a separate sorbent section allows for blank determinations, and ports on the back of the device allow for sorbent transfer for thermal desorption and GC analysis. The Ultra III offers users the simplicity of passive sampling and the low detection limits evidenced with canisters without the hassle and expense.

10:30 a.m.

3E Mobile: Putting MSDS Management in the Palm of Your Hand, 3E Company

A demonstration of 3E Mobile, which provides 3E Online-MSDS customers with the ability to search for and view MSDSs from hand-held devices.

11:30 a.m.

When the Dust Settles: A Brief Tutorial on Combustible Dust and Preventive Housekeeping, Nilfisk Industrial Vacuums

In recent times, combustible dust has become a key concern for all manufacturing industries. This brief presentation reviews the combustible dust issue, best practices for preventive maintenance, and a tutorial on choosing a properly equipped industrial vacuum cleaner, in order to dramatically decrease the risk of a combustible dust fire or explosions.

Noon

Area Monitoring Sampling Kit to Collect Multiple Airborne Contaminants from Chemical/Petroleum Spills, Galson Laboratories

Many different chemicals may need to be collected at a chemical or petroleum spill site. This kit allows the sampler to collect several different chemicals at the same time and place, indoors or out. A few applications: fenceline monitoring at remediation sites; petroleum spills; chemical spills; and railroad tank cars leaks. The kit is designed to allow sampling devices to be added or removed, depending on the contaminants of interest, and it affords protection against outdoor elements.

12:30 p.m.

New, Mobile and Wireless Area Monitoring and Fence Line System, Draeger Safety, Inc.

The new Draeger X-zone 5000 provides rapid area monitoring and fence line protection using a mobile alarming device along with the Draeger X-am 5000 portable monitor. The units can be networked to provide increased safety, lower cost of ownership and improved productivity to any company.



Showtime 7:45 a.m.

The Last Regiment of Syncopated Drummers

Enjoy one of the few remaining syncopated drum corps! This high energy group incorporates both military style rudiments with “street beat” rhythms. Notable clients include the Portland Trailblazers and Nike.

CR 301

Changing a Safety Culture: How Leadership and Front-Line Think

10:30 a.m.–11:30 a.m. + OCC, D136

Presenter: R. Horan, Aramark, West Chester, PA. **Moderator:** S. Weeks, Hargrove Engineers + Constructors, Mobile, AL. **Monitor:** R. Dehart, Barzan Onshore Project, Doha - State of Qatar.

Changing a safety culture requires an authentic commitment at the leadership level and effective participation from front-line workers. As a front-line worker for 15 years at a large utility company, I have lived through several culture changes. As a safety professional and manager, I was actively involved during two distinct safety culture transitions. With 32 years' experience, I have learned how the culture of an organization sets the tone for everything in safety.

CR 302

Conflict Management and Resolution for Safety Professionals

10:30 a.m.–11:30 a.m. + OCC, D138

Presenter: J. Klane, Klane's Education Information Training Hub, LLC (KEITH), Fairfield, ME. **Moderator:** D. Gibbon, Rocky Mountain Power, Salt Lake City, UT.

Safety professionals often have to manage or resolve conflicts. These may be between workers, managers, trainees, building occupants, building representatives, etc. Traditional "positional" conflict management (i.e., typical compromises) often fails to satisfy either party. We will look at what works, what doesn't, and why more progressive techniques work best. Case examples will be discussed and attendee cases are welcome.

PO 105

Laboratory Health and Safety

10:30 a.m.–12:10 p.m. + OCC, B119

Arranger: J. Peters, Brookhaven National Laboratory, Upton, NY. **Moderator:** S. Hemperly, Hitachi Global Storage Technologies, San Jose, CA. **Monitors:** P. Jensen, MN; V. Rodriguez, Ligand Pharmaceuticals Inc., San Diego, CA.

10:30 a.m.

Testing the Protection Level of Different Lab Coat Fabrics by Direct Exposure to a Pyrophoric Chemical (n-butyl Lithium). (PO 105-1) M. Fahim, K. Kretchman, North Carolina State University, Raleigh, NC.

10:50 a.m.

Active IEQ Monitoring and Control of Ventilation in Laboratories. (PO 105-2) G. Sharp, Aircuity, Inc., Newton, MA.

11:10 a.m.

Results of a Comparison Study of Sulfur Hexafluoride and Nitrous Oxide as Tracer Gases for ASHRAE 110 Hood Testing. (PO 105-3) P. Greenley, W. Wong, E. Zuniga, E. Guffey, L. Norford, A. Kalil, Massachusetts Institute of Technology, Cambridge, MA.

11:30 a.m.

Chemical Exposure Assessment of Graduate Students During Research Activities in Korea. (PO 105-4) J. Park, Y. Choi, SoonChunHyang University, Asan, Chung-nam, Republic of Korea.

11:50 a.m.

Evaluation of Filtration Performance of NIOSH-approved Particulate Air-Purifying Filtering Facepiece Respirators by Photometric and Particle Number-based Test Methods. (PO 105-5) S. Rengasamy, NIOSH, Pittsburgh, PA; B. Eimer, URS Corp., Pittsburgh, PA.

PO 101

Asbestos Exposure Assessment Strategies

10:30 a.m.–12:30 p.m. + OCC, A108

Arranger: M. Vadali, University of Minnesota, Brooklyn Park, MN. **Moderator:** B. Graffeo, Eli Lilly, Indianapolis, IN. **Monitors:** S. Arnold, EHS LLC, Roswell, GA; R. Rogers, U.S. Army, Bel Air, MD.

10:30 a.m.

The Use of Analogous Materials to Assess Historical Exposures — An Example Using Asbestos Cloth Products. (PO 101-1) M. Holton, R. Adams, ENVIRON International Corporation, Princeton, NJ.

10:50 a.m.

Exposure and Airborne Fiber Concentrations Due to Environmental Asbestos and Erionite. (PO 101-2) C. Robbins, K. Hayman, M. Krause, B. Kelman, Veritox, Inc., Redmond, WA.

11:10 a.m.

Use of the Releasable Asbestos Field Sampler and a Breathing Zone Model for Estimating Exposure to Environmental Contaminants. (PO 101-3) J. Thornburg, RTI International, Research Triangle Park, NC; W. Barrett, US EPA, Cincinnati, OH; J. Kominsky, Environmental Quality Management, Cincinnati, OH; J. Konz, US EPA, Washington, DC; D. Collier, US EPA, Chicago, IL.

11:30 a.m.

Simulation Tests of Occupational Asbestos Exposure from Removal of Artificially Weathered Roof Coating and Cements. (PO 101-4) P. Sheehan, Exponent, Oakland, CA; F. Mowat, Exponent, Menlo Park, CA.

11:50 a.m.

Analysis of Asbestos-Containing Gaskets and Packing Short-Term Exposure Data by Task. (PO 101-5) C. Simmons, F. Boelter, ENVIRON International Corporation, Chicago, IL.

12:10 p.m.

A Validated Approach for Assessing Exposure to Asbestos in Soil. (PO 101-6) W. Barrett, US EPA, Cincinnati, OH; J. Thornburg, RTI International, RTP, NC; J. Kominsky, Environmental Quality Management, Inc., Cincinnati, OH; J. Konz, US EPA, Washington, DC.

Late-Breaking!

Nuclear Emergency in Japan — Physics and Hazards

10:30 a.m.–12:30 p.m. + OCC, F149

You are probably the person in your organization most knowledgeable about radiation hazards. After the recent events in Japan, you probably want to know more about nuclear accidents, radiation, and human risk. This session presents experts in the field.

At this session several of AIHA's more experienced Certified Health Physicists will describe tools that increase your ability to address such questions. They include Ray Johnson, who provides radiation safety audits and training to the National Institutes of Health (NIH) and Bob Gallagher, who participated in the emergency response after the Chernobyl incident.

+ Technical Program: Monday

PO 102

Ergonomics: Shoulders, Back and Lower Extremities

10:30 a.m.–12:30 p.m. + OCC, B110

Arranger and Moderator: M. O'Reilly, Albany University, Manlius, NY. **Monitors:** J. Haney, New York Department of Labor, Syracuse, NY; L. Orta Anés, University of Puerto Rico, San Juan, PR.

10:30 a.m.

Risk Factors Associated with Low-Back Injuries among University Residence Hall Employees Based on Ergonomic and Lifestyle Choices. (PO 102-1) B. Bidassie, J. McGlothlin, Purdue University, West Lafayette, IN.

10:50 a.m.

Can Adding a Seat Cushion Reduce Exposure to Whole-Body Vibration? (PO 102-2) S. Chervak, US Army, Aberdeen Proving Ground, MD.

11:10 a.m.

Whole-Body Vibration in Snow Removal Loader Operations: Do Traction Chains Cause Low-Back Pain? (PO 102-3) R. Blood, P. Rynell, P. Johnson, University of Washington, Seattle, WA.

11:30 a.m.

An Analysis of the Clearance Between Electric Utility Fleet Vehicle Pedals and Adjacent Structures for Worker Anthropometry and Safe Driving Conditions. (PO 102-4) P. Seeley, Ergonomics Solutions, LLC, Wales, WI; R. Marklin, K. Saginus, Marquette University, Milwaukee, WI; S. Freier, Dueco, Waukesha, WI.

11:50 a.m.

A Radiologic Study of Correlation Between Lumbar Spine Geometry and Gross Anthropometry. (PO 102-5) R. Tang, R. Sesek, Auburn University, Auburn, AL.

12:10 p.m.

Simple Ergonomic Assessment Tools and Design Guidelines for the Oil, Gas, and Petrochemical Industries. (PO 102-6) B. McGowan, Humantech, Inc., Ann Arbor, MI.

PO 103

Exposure Modeling Strategies

10:30 a.m.–12:30 p.m. + OCC, Oregon 203

Arranger: M. Vadali, University of Minnesota, Brooklyn Park, MN. **Moderator:** T. Blodgett, ERM, St. Paul, MN. **Monitors:** S. Jahn, Savannah River Nuclear Solutions, LLC, Aiken, SC; R. Rotterman, ENVIRON International Corporation, Chicago, IL.

10:30 a.m.

Bayesian Statistics Spreadsheets for Exposure Assessment. (PO 103-1) S. Kim, M. Virji, NIOSH, Morgantown, WV; S. Shulman, M. Waters, NIOSH, Cincinnati, OH.

10:50 a.m.

Application of Traditional and Bayesian Statistics in Chemical Exposure Assessments of Factories Located Outside of the United States. (PO 103-2) M. Andrew, Sumerra, Hong Kong; T. Chen, Forensic Analytical Consulting Services, Inc., Hayward, CA.

11:10 a.m.

Comparison of Mechanistic and Semi-Empirical Two-Zone Models for Estimating Dust Exposures. (PO 103-3) R. Jones, C. Simmons, E. Boelter, ENVIRON International Corporation, Chicago, IL.

11:30 a.m.

Accurate Analysis of Log-normally Distributed Exposure Data Subject to Single or Multiple Detection Limits. (PO 103-4) T. Mathew, University of Maryland, Baltimore, MD; K. Krishnamoorthy, University of Louisiana at Lafayette, Lafayette, LA.

11:50 a.m.

IH SkinPerm: Estimating Dermal Dose. (PO 103-5) R. Tibaldi, ExxonMobil, Baytown, TX; D. Drolet, Longueuil, QC, Canada; W. ten Berg, Santoxar, Westervoort, Netherlands.

12:10 p.m.

Stoffenmanager: Bringing Science into Practice. (PO 103-6) A. Winkes, H. Heussen, K. Verbist, Arbo Unie Expert Center for Chemical Risk Management, Nijmegen, Netherlands; M. van Niftrik, W. Fransman, A. Hollander, TNO Quality of Life, Zeist, Netherlands.

PO 104

Noise Protection, Training, Measurement and Reduction

10:30 a.m.–12:30 p.m. + OCC, Oregon 202

Arranger: C. Richards, NY. **Moderator:** S. Hacker, Novus International, St. Charles, MO. **Monitors:** M. Horowitz, OSHA, CA; M. Jones, Department of Veterans Affairs, Iowa City, IA.

10:30 a.m.

User Efficacy in Fitting Hearing Protection. (PO 104-1) T. Schulz, Sperian Protection, Fredericktown, PA; R. Miller, US Airways, Pittsburgh, PA.

10:50 a.m.

Pilot Research Project in Quantitative Earmuff Noise Insertion Loss Characterization. (PO 104-2) S. Caporali-Filho, University of Puerto Rico, San Juan, PR.

11:10 a.m.

Evaluation of the NIOSH Hearing Loss Simulator. (PO 104-3) R. Randolph, NIOSH, Pittsburgh, PA.

11:30 a.m.

Applying New Noise Criteria to the Workplace. (PO 104-4) J. Ratliff, Kanto Corporation, Portland, OR.

11:50 a.m.

Application of Triage for Noise Exposure at One of the Largest Petroleum Refineries in India. (PO 104-5) G. Desai, International Safety Systems, Inc., Vadodara, India; R. Naik, Essar Oil Limited, Jamnagar, India; M. Mehta, International Safety Systems, New York, NY.

12:10 p.m.

Cost and Human Impact Analysis of Noise Control Solutions. (PO 104-6) E. Miller-Klein, SSA Acoustics, LLP, Seattle, WA.

RT 201

Case Studies on Nonionizing Radiation

10:30 a.m.–12:30 p.m. + OCC, F152

Arranger: K. Merritt, Safety and Quality Assurance Alliance, Hampton, VA. **Moderator:** T. Fuller, Illinois State University, Bloomington, IL. **Monitors:** A. Butler, Butler Health and Safety, Inc., San Pedro, CA; M. Phillips, University of Oklahoma, Oklahoma City, OK.

Nonionizing radiation presents a broad spectrum of hazards in the occupational and general environment. Case studies of real-life situations will be presented for several portions of the nonionizing spectrum.

Please . . .

turn off cell phones in all sessions.

- + **Lessons Learned from a Laser Eye Injury in a Complex Optical Environment.** K. Merritt, Safety and Quality Assurance Alliance, Hampton, VA.
- + **Practical Application of the ANSI/IEEE RF Safety Program Standard to Cellular/Wireless Antenna Sites.** R. Curtis, Curtis Engineering & Management Services, South Jordan, UT.
- + **Defibrillator Implants: Occupational Exposure to Electromagnetic Radiation.** B. Murdoch, Argonne National Laboratory, Argonne, IL.
- + **Magnetic Particle Inspection Equipment and Active Medical Implants.** D. Baron, DB-Emf, Austin, TX.

RT 202

Essential Hazardous Materials and Emergency Response Resources and Tools for the IH

10:30 a.m.–12:30 p.m. + OCC, B116

Arranger: A. Maier, Toxicology Excellence for Risk Assessment (TERA), Cincinnati, OH.
Moderator: R. Richards, Arlington, VA.
Monitors: D. Larson, Lawrence Livermore National Laboratory, Livermore, CA; A. Parker, Toxicology Excellence for Risk Assessment, Cincinnati, OH.

Tools that provide for rapid access to information are an essential ingredient to effective response to chemical emergencies. This roundtable introduces features of key online resources providing critical support for the information needs of the industrial hygienists immediately during an emergency response. The session provides descriptions and applications on several easy-to-use and intuitive resources, including the TOXNET cluster of databases, WISER (Wireless Information System for Emergency Responders), REMM (Radiation Emergency Medical Management), the CAMEO (Computer-Aided Management of Emergency Operations) system of software applications, and the new CHEMM (Chemical Hazards Emergency Medical Management) tool.

- + **Critical Information Needs for the Industrial Hygienist During Emergency Response.** J. Koerner, U.S. Department of Health & Human Services, Washington, DC.
- + **Use and Application of Toxicology Resources for Emergency Responders.** A. Maier, Toxicology Excellence for Risk Assessment (TERA), Cincinnati, OH.

- + **CAMEO — Software to Support Emergency Management.** M. Miller, National Oceanic and Atmospheric Administration, Seattle, WA.
- + **Chemical Emergency Medical Management (CHEMM) Website and Applications.** P. Hakkinen, National Library of Medicine, Bethesda, MD.

RT 203

Managing Moisture on Construction Sites

10:30 a.m.–12:30 p.m. + OCC, A106

Arranger: E. Light, Building Dynamics, LLC, Ashton, MD. **Moderator:** S. Fess, Xerox, Webster, NY. **Monitors:** J. Cohen, The Cohen Group, San Mateo, CA; D. Maser, Enviroair Consultants, Inc., Chesterfield, MI.

Water damage during the construction process has been a significant quality control concern and is now a major environmental issue with respect to mold growth and damp building exposure. The causes and dynamics of construction moisture, along with control measures, will be discussed. Integrating moisture prevention into project planning and site management will be emphasized. Unique conditions present during construction limit the use of traditional testing and remediation procedures generally used by industrial hygienists to address mold growth. More specific mold controls needed to protect patients during hospital renovation will also be presented.

- + **Controlling Water Damage and Mold During Construction: A General Contractor's Perspective.** S. Blanchard, Hunt Construction Group, Indianapolis, IN.
- + **Moisture in the Construction Process.** M. Williams, Williams Building Diagnostics, Bradenton, FL.
- + **The Industrial Hygienist's Role in Preventing Mold Growth During Construction.** B. Epstien, Epstien Environmental Resources, LLC, Marietta, GA.
- + **Why Mold Testing and Remediation Guidelines Don't Work on Construction Sites.** E. Light, Building Dynamics, LLC, Ashton, MD.
- + **Mold Control During Hospital Construction.** L. Lee, Pacific Industrial Hygiene, Kirkland, WA.

RT 204

Taking the Mystery Out of Mentoring: Practical Tools to Make a Real Difference

10:30 a.m.–12:30 p.m. + OCC, C121

Arranger: B. Lewis, NIOSH, Morgantown, WV. **Moderator:** B. Rathbun, US Army, Aberdeen Proving Ground, MD. **Monitors:** T. Grigorieff, D. Burns, West Virginia University, Morgantown, WV.

As a strategy for helping people to thrive on the job, in life and at school, mentoring works. It aids in the confidence, resources and support that is needed to achieve their potential. These positive outcomes are only possible when these individuals are engaged in high-quality mentoring relationships. Utilizing evidence-based standards for practice and incorporating the latest research, this discussion will help participants begin the process of transferring their invaluable skills and knowledge to the future leaders of the industrial hygiene profession through mentorship. This will be a highly interactive roundtable focusing on the role of the mentor in professional and personal development. Special insight is provided from professionals as well as students who have participated in successful mentoring programs.

- + **What Does a Mentor Really Do, Anyway?** B. Lewis, NIOSH, Morgantown, WV.
- + **Understanding Your Audience: A Student and Young Professional's Perspective.** B. Middaugh, Purdue University, Zionsville, IN.
- + **Mentoring: Roadblocks and Solutions.** N. Greeson, Duke University, Durham, NC.
- + **The Benefits of Being a Mentor: Enhancing Our Professional Lives.** C. Jerrick, Praxair Inc., Plymouth, MN.
- + **From Clark Kent to Superman: Changing Lives through the AIHA Mentoring Program.** M. Rupert, Concentra EHS, Cincinnati, OH.

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.

+ Technical Program: Monday

RT 205

U.S. Chemical and Occupational Health Regulation and Policy for Engineered Nanomaterials

10:30 a.m.–12:30 p.m. + OCC, Oregon 201

Arranger: T. Huynh, University of Minnesota, Minneapolis, MN. **Moderator:** R. Goldman, 3M Company, St. Paul, MN. **Monitors:** M. Bernabo, PPG Industries, Allison Park, PA; M. Hoover, NIOSH, Morgantown, WV.

Commercialization of nanotechnology has been growing at an unprecedented rate while EHS research on engineered nanomaterials is only beginning to pick up its pace. Knowledge gaps concerning their toxicity, exposure assessment and risk assessment will likely take some time to fill. Meanwhile, regulatory agencies are taking cautious steps in forming regulation. This roundtable brings together representatives from EPA, OSHA, and the Environmental Law Institute for a lively discussion on current chemical and occupational health regulation and policy for engineered nanomaterials. Following is a case study of how Intel Corporation manages engineered nanomaterials risk.

- + **Nanomaterials: OSHA's Approach to Protecting Workers from Potential Hazards.** J. Carter, OSHA, Washington, DC.
- + **Experiences with Nanomaterials under TSCA.** S. Prothero, US EPA, Washington, DC.
- + **Potential Regulation of Nanotechnologies under Major Environmental Laws.** J. Pendergrass, Environmental Law Institute, Washington, DC.
- + **Applied NanoStructured Solutions, LLC Policy for Environmental, Safety and Health Management of Nanomaterials.** A. Jones, Applied NanoStructured Solutions, LLC, Baltimore, MD.

RT 206

AIHA® Value Strategy Session on Case Studies

10:30 a.m.–1:00 p.m. + OCC, B113

Arranger and Moderator: B. Silverstein, TVS Associates, Yardley, PA. **Monitors:** A. Becker, Arkema, Inc., King of Prussia, PA; R. Johnson, TVS Associates, Blue Bell, PA.

The AIHA® Value Strategy was developed to promote investment in industrial hygiene programs and interventions using business alignment and financial metrics. Participants will hear about successful approaches used

in the manufacturing, agriculture, pharmaceutical, aircraft and dry cleaning industries to identifying and communicating the value of industrial hygiene through the business case studies developed. Come and learn how others have used strategies to garner support for employee protection and workplace improvement.

- + **California Winegrape Industry — Ergonomic Picking Tub Usage Project.** A. Wolfe, AgSafe, Modesto, CA.
- + **Ergonomic Assessment at a Spark Plug Wire Manufacturer.** G. Popov, University of Central Missouri, Warrensburg, MO.
- + **The Value of Occupational Safety and Health: A Case Study of Chemical Substitution.** E. Biddle, NIOSH, Morgantown, WV.
- + **Business Case Analyses for Engineering Controls for APIs.** C. Ulriksen, ESIS, Inc., Cherry Hill, NJ.
- + **Using Business Metrics to Engage Leadership.** B. Bethel, Sikorsky Aircraft Corp., Stratford, CT.

CR 303

Dust Explosion Hazard Assessment — Including OSHA's Combustible Dust National Emphasis Program

11:30 a.m.–12:30 p.m. + OCC, Oregon 204

Presenter: V. Ebadat, Chilworth Global, Plainsboro, NJ. **Moderator:** L. Gualandri, INEOS, Houston, TX. **Monitor:** P. Ceo, University of Texas, Houston, TX.

The majority of powders that are used in the processing industries are combustible (also referred to as flammable, explosible). An explosion will occur if the concentration of the combustible dust that is suspended in air is sufficient to propagate flame when ignited by a sufficiently energetic ignition source. This presentation will discuss the conditions that are required for dust cloud explosions to occur and presents a well-trying approach to identify, assess, and eliminate/control dust explosion hazards in facilities.

Luncheon Discussions

Students and Early Career Professionals

12:30 p.m.–1:30 p.m. + OCC, Expo, Hall D

Luncheon Discussions are small, highly 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.

1. CIH Certification

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

2. How to Break the Ice with Workers to Accomplish IH Tasks

Facilitator: C. Boraiko, Middle Tennessee State University, Murfreesboro, TN.

3. Tips and Tricks for Effectively Communicating with Management

Facilitator: C. Hovde, Caterpillar, Minneapolis, MN.

4. What is it Like to Manage H&S at Multiple Locations: Travel, Organization and Management Tips You Need to Know for a Multi-site Job

Facilitator: C. Jerrick, NAIG Safety & Environmental, Plymouth, MN.

5. What You Always Wanted to Know but Were Afraid to Ask about AIHA Committees: Projects and Activities to Become Involved in the Profession

Facilitator: L. Vivekanand, Tokyo Electron, Albany, NY.

Topics subject to change.

Workshop

Sold Out

Unsolved IH Mysteries Workshop

12:30 p.m.–2:00 p.m. + OCC, D133

Test your knowledge! Actual case studies involving IH field work are presented. Participants are given all the data — players, circumstances, time lines — but not the outcomes. Working in teams, colleagues discuss the cases and potential remedies and each group reports its findings. At the end of the session, the facilitator explains what actually occurred.

A boxed lunch is included.

Facilitator: Rob MacLeod, CIH, CSP, CRSP, CCEP, Celtic Exploration, Calgary, Alberta, Canada

Exhibitor Product Demos and Presentations

1:00 p.m.–2:00 p.m. + Expo Theater, Hall D

1:00 p.m.

QuadModeSM Air Sampling Technology Found in the Gilian GilAir Plus, Sensidyne, LP

Sensidyne introduces the technology and application of QuadModeSM air sampling that enables Industrial Hygienists to perform a wider range of applications using a single pump without external flow adaptors. QuadModeSM technology is found only in the Gilian GilAir Plus from Gilian.

1:30 p.m.

Get Aggressive with Microbial Air Sampling — A New Approach to Improve Data Consistency and Interpretation, Mycometer, Inc.

Learn how aggressive air sampling can improve data consistency for better exposure assessment of bioaerosols. The Mycometer technology provides the opportunity to use aggressive sampling without the pitfalls of other air sampling methods, such as overloading. Watch how easy it is to use the rapid, reliable and robust Mycometer technology for air sampling. Hear about the field study data and its significance for proper assessment of environments. Find out what your sampling may be missing!

Jeffery S. Lee Lecture

Occupational Exposure Guidelines — Why Process is as Important as Science

1:00 p.m.–2:00 p.m. + OCC, Oregon 202

Lecturer: Lisa M. Brosseau, ScD, CIH, Associate Professor, Division of Environmental Health Sciences, School of Public Health, University of Minnesota, Minneapolis, MN



A process in which bias is balanced and conflict of interest is minimized is the key to a successful scientific decision-making process for developing occupational exposure guidelines. In this lecture, Dr. Brosseau, the current Chair of ACGIH® and former Chair of the Threshold Limit Values for Chemical Substances (TLV®-CS) Committee, will describe the approach used by ACGIH and its scientific guideline committees to ensure

an independently-derived outcome that encompasses a wide range of scientific expertise and provides appropriate opportunities for external input.

CR 304

Using ISO Life Cycle Assessment Standards

2:00 p.m.–3:00 p.m. + OCC, B110

Presenter: E. Madsen, Extended Producer Responsibility, Inc., Canton, MI. **Moderator:** L. Alvarado, AM Health and Safety, Inc., Beaver, PA. **Monitor:** S. Kasberger, West Virginia University, Morgantown, WV.

Life cycle assessment (LCA) is a tool for identifying and evaluating the environmental aspects of products and services from “cradle to cradle:” from the extraction of resource inputs to the eventual disposal or, preferably, reuse of the product or its waste. ISO 14040 standards give guidelines on the principles and conduct of LCA studies that provide an organization with information on how to reduce the overall environmental impact of its products and services.

CR 305

Consumer Product Toxicology

2:00 p.m.–3:00 p.m. + OCC, B119

Presenter: T. Uliano, EHS Consultant/ Adjunct Instructor, Portland, OR. **Moderator:** D. Gibbon, Rocky Mountain Power, Salt Lake City, UT. **Monitor:** E. McClellan, University of Michigan, Ann Arbor, MI.

Average consumers purchase hundreds of products annually and, on any given day, are unsuspectingly exposed to scores of chemicals. Exposure encompasses all routes of entry and the toxicity of these agents is poorly evaluated and not fully understood. Children are especially vulnerable. A few of these agents are persistent in the environment and found in the body tissues of most humans. This presentation will explore the confusing and ubiquitous nature of everyday commercial products.

PO 106

Biosafety and Environmental Microbiology I: Allergens, Fungi, and IEQ: What's New?

2:00 p.m.–4:20 p.m. + OCC, A106

Arrangers: R. Strode, Chemistry & Industrial Hygiene, Inc., Wheatridge, CO; J. Hicks, Exponent, Inc., Oakland, CA. **Moderator:**

D. Hurley, Wake Forest University, Winston-Salem, NC. **Monitors:** M. Cooper, Exponent, Inc., Menlo Park, CA; L. Fondren, Lovelace Respiratory Research Institute, Albuquerque, NM.

2:00 p.m.

Quality Control Procedures Using Multiplex Array for Indoor Allergens in an Analytical Laboratory. (PO 106-1)

E. King, B. Smith, S. Filep, D. Block, J. Armstrong, M. Chapman, Indoor Biotechnologies, Charlottesville, VA.

2:20 p.m.

Efficacy of Owner-Collected Dust Samples in the Evaluation Residential Allergen and Fungal Levels. (PO 106-2)

M. Van Dyke, C. Rose, A. Ridder, J. Martyny, National Jewish Health, Denver, CO.

2:40 p.m.

A Field Study on the Growth and Removal of Microorganisms and Allergens on Carpet. (PO 106-3)

R. Lewis, K. Ong, B. Emo, J. Kennedy, Saint Louis University, St. Louis, MO; C. Shorter, University of Otago, Wellington South, New Zealand; C. Hide, Hally Group NZ, Christchurch, New Zealand.

3:00 p.m.

Spore Trap Sampling Data Alone Does not Provide Enough Information in Most Investigations to Determine the Allergenic Potential of an Indoor Environment. (PO 106-4)

R. Billups, Air Allergen & Mold Testing, Inc., Stone Mountain, GA.

3:20 p.m.

Indoor Air Quality in Schools: What is Lurking in Our Classrooms and What is Done to Remediate It? (PO 106-5)

B. Cortes, EMSL Analytical Inc., Orlando, FL.

3:40 p.m.

Effects of Flood on Pre-Existing Mold Spores within Drywall Sold by Distributors — Results of a Two-Year Study. (PO 106-6)

P. Haas, Morse Zehnter Associates, West Palm Beach, FL.

4:00 p.m.

Eight Proven Steps to Prevent Indoor Environmental Quality Problems. (PO 106-7)

M. Matilainen, AMEC Earth and Environmental, Westford, MA.

+ Technical Program: Monday

RT 207

Defining and Evaluating Data Quality

2:00 p.m.–4:30 p.m. + OCC, B116

Arranger: C. Simmons, ENVIRON International Corporation, Chicago, IL.
Moderator: J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.
Monitors: M. Weeks, Medgate Inc., Toronto, ON, Canada; G. Bangs, Bureau Veritas, Seattle, WA.

The quality of exposure data used for risk assessment and risk control is critical to our ability to evaluate, eliminate and control occupational risks. Additionally, retrospective exposure assessments are becoming increasingly important as a source of exposure information in support of governmental health risk assessments, epidemiologic studies, litigation, and REACH-related exposure scenario evaluation. In this roundtable we will define what is meant by “data quality,” present available guidance on evaluation methods for data quality assessment and provide examples conducted by experts. Our ultimate goal is to encourage dialogue on this topic to assist the AIHA® exposure assessment strategies committee in the development of guidance documents and tools for evaluating data quality.

- + **Introduction and Overview of Data Quality Guidelines: What, Who, Why?** C. Simmons, ENVIRON International Corporation, Chicago, IL.
- + **IPCS Data Quality Harmonization Project.** W. Griffith, University of Washington, Seattle, WA.
- + **Data Quality and Prospective Exposure Assessment.** M. Waters, NIOSH, Cincinnati, OH.
- + **Data Quality and Retrospective Exposure Assessments.** F. Boelter, ENVIRON International Corporation, Chicago, IL.
- + **Data Quality in the Courtroom.** P. Hewett, Exposure Assessment Solutions, Inc., Morgantown, WV.

PO 107

Engineering and Control Technology

2:00 p.m.–4:40 p.m. + OCC, D138

Arranger and Moderator: S. Battista, 3M Company, Maplewood, MN. **Monitors:** S. Durgam, NIOSH, Cincinnati, OH; E. Jones, ExxonMobil, Annandale, NJ.

2:00 p.m.

Design, Development, and Evaluation of a Noise Control Enclosure for a Model Jet Engine. (PO 107-1) J. Black, J. Rinker, R. Yon, C. Holder, J. Slagley, U.S. Air Force, Wright-Patterson AFB, OH.

2:20 p.m.

Ensuring a Robust Industrial Hygiene Program by Maximizing Engineering Control Success by Implementing and Cultivating a Containment Culture and Soft Elements. (PO 107-2) A. Doane, K. Borud, Roche Colorado Corporation, Boulder, CO; K. Schmerber, D. Zier, Hellman & Associates, Golden, CO; M. Rothney, Hospira Boulder, Inc., Boulder, CO.

2:40 p.m.

Determination of Capture Velocities for Vapors and Gases by Schlieren Photography. (PO 107-3) S. Wang, C. Chen, Taiwan University, Taipei City, Taiwan; J. Ciou, Institute of Occupational Safety and Health, Taipei County, Taiwan.

3:00 p.m.

Utilization of Computational Fluid Dynamics (CFD) in the Design of Engineering Controls to Reduce the Exposure to Airborne Lead Particulate Matter and Volatile Organic Compounds in an Armory. (PO 107-4) D. Hall, C. Strode, R. Strode, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

3:20 p.m.

Preliminary Results from Tests on Two Tracer Gas Protocols Developed to Determine Ventilation Flow Rates and Patterns in Naturally Ventilated Munitions Storage Bunkers. (PO 107-5) R. Rogers, L. Kneten, G. Braybrooke, I. Richardson, U.S. Army, Bel Air, MD; T. Mott, U.S. Army, Fort Lewis, WA.

3:40 p.m.

Field Effectiveness of Portable HEPA-Equipped Air Filtering Devices (Pilot Study). (PO 107-6) D. Walsh, Walsh Certified Consultants, Inc., Las Vegas, NV.

4:00 p.m.

Quantitative Assessment on the Effectiveness of Different Exposure Control Strategies for Hexavalent Chromium Mitigation in Stainless Steel Welding. (PO 107-7) S. Caporali-Filho, R. Aviles, University of Puerto Rico, San Juan, PR.

4:20 p.m.

Mercury Exposure Assessment and Control at Third-Party Lighting Manufacturing Sites in China. (PO 107-8) X. Jing, International Safety Systems, Inc.,

Shanghai, China; T. Mehta, M. Mehta, International Safety Systems, Inc., New York, NY.

PO 108

General Topics in Occupational Safety

2:00 p.m.–4:40 p.m. + OCC, D139

Arrangers: G. Mellor, Omega Environmental Services, Inc., Hackensack, NJ; T. Case, Case OS&H Consulting, Royersford, PA.
Moderator: V. Kero, Hackensack, NJ.
Monitors: E. Willworth, Atlantic Environmental and Marine Services, Plymouth, MA; T. Case, Case OS&H Consulting, Royersford, PA.

2:00 p.m.

Fatal Injuries among New York City Construction Workers, 1996–2008. (PO 108-1) N. Clark, S. Sedlar, NYC Department of Health and Mental Hygiene, New York, NY.

2:20 p.m.

Factors Associated with Worker Slipping in Fast Food Restaurants. (PO 108-2) T. Courtney, S. Verma, Y. Huang, W. Chang, Liberty Mutual, Hopkinton, MA; K. Li, Chung-hua University, Hsin-chu, Taiwan; A. Filiaggi, Liberty Mutual, Warrenville, IL.

2:40 p.m.

Particulate Generation, Exposure, and Control in Construction. (PO 108-3) W. Lenczuk, Tutor-Perini, New York City, NY.

3:00 p.m.

Tracking the Effects of Dehumidification of a Structure Impacted by Water. (PO 108-4) M. Divine, P. Haas, Morse Zehnter Associates, West Palm Beach, FL.

3:20 p.m.

What Happens Next? Bridging the Gap between Construction Industrial Hygiene and Compliance. (PO 108-5) H. Warren, Georgia Institute of Technology, Atlanta, GA; L. Capicik, Brasfield & Gorrie, LLC, Atlanta, GA.

3:40 p.m.

The Macondo Well Blowout — Safety System Failure from Design to Catastrophe. (PO 108-6) M. Larranaga, Q. Wang, H. Kincannon, P. Smith, R. Lehnert, J. Brown, Oklahoma State University, Stillwater, OK.

4:00 p.m.

A Paradigm Shift in Safety Culture at a Diverse Service Organization. (PO 108-7) L. deLaski, Emilcott, Chatham, NJ.

4:20 p.m.

Safety Analytics: The New Science of Prevention. (PO 108-8) T. Hohn, PureSafety, Franklin, TN; D. Duden, Deloitte Consulting, LLP, Hartford, CT.

PO 109

Risk Assessment Case Studies

2:00 p.m.–5:00 p.m. + OCC, D136

Arrangers: P. Williams, E Risk Sciences, LLP, Boulder, CO; A. Rossner, Clarkson University, Potsdam, NY. **Moderator:** G. Bratt, Logistics Management Institute, Bel Air, MD. **Monitors:** L. Smith, Weston Solutions, Inc., West Chester, PA; K. Borud, Roche Colorado Corporation, Boulder, CO.

2:00 p.m.

Assessing the Risk to Firefighters from Chemical Vapors and Gases during Vehicle Fire Suppression. (PO 109-1) K. Fent, NIOSH, Cincinnati, OH.

2:20 p.m.

Hydrogen Fluoride and Carbon Monoxide Related Aggregate Exposure Reconstruction. (PO 109-2) J. Persky, F. Boelter, ENVIRON International Corporation, Chicago, IL.

2:40 p.m.

Determinants of Lethal Carbon Monoxide Exposure inside a Recreational Vehicle. (PO 109-3) S. Gaffney, D. Paustenbach, ChemRisk, LLC, San Francisco, CA; J. Sahmel, ChemRisk, LLC, Boulder, CO; J. Knutsen, Colorado School of Mines, Golden, CO.

3:00 p.m.

Estimation of Lead-Containing Coatings Exposure and the Potential for Future Health Risks for Children in Kazakhstan. (PO 109-4) E. Rasmuson, A. Korchevskiy, J. Rasmuson, D. Hall, R. Strode, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; R. Olsen, CDM, Inc., Denver, CO.

3:20 p.m.

Development and Validation of Lead-Containing Paint Limit for Use During XRF Inspections of Industrial Facilities. (PO 109-5) A. Duane, A. Korchevskiy, E. Rasmuson, C. Strode, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

3:40 p.m.

A Comparison of Thermal Work Limit and WBGT Heat Stress Indices. (PO 109-6) O. Malik, M. Dave, M. Levitsky, ECOH Management Inc., Mississauga, ON, Canada.

4:00 p.m.

PCB-Caulk Removal Project at JSC Houston, Texas. (PO 109-7) W. Young, W. Molenda, CSC–Applied Technology Group, Houston, TX; P. Stanch, NASA, Houston, TX.

4:20 p.m.

Airborne Asbestos Concentrations Associated with Replacement of Internal Valve Gaskets and Packing. (PO 109-8) A. Madl, D. Hollins, E. Donovan, ChemRisk, San Francisco, CA; K. Devlin, ChemRisk, Boulder, CO; P. Dopart, The Johns Hopkins University, Baltimore, MD; P. Scott, ChemRisk, Pittsburgh, PA.

4:40 p.m.

Antineoplastic Drug Contamination Levels throughout the Medication Circuit in British Columbian Hospitals. (PO 109-9) C. Hon, G. Astrakianakis, W. Chu, K. Teschke, University of British Columbia, Vancouver, BC, Canada; P. Chua, Fraser Health, Burnaby, BC, Canada.

PO 110

Management and Training Issues: Communication

2:00 p.m.–5:00 p.m. + OCC, A108

Arrangers: S. Skipper, EnSafe Inc., Knoxville, TN; O. Zahn, U.S. Air Force, CA. **Moderator:** O. Zahn, U.S. Air Force, CA. **Monitors:** B. Rathbun, U.S. Army, Aberdeen Proving Ground, MD; J. Jarrell, University of Cincinnati, Cincinnati, OH.

2:00 p.m.

The Impact of HAZWOPER Training on Workplace Knowledge, Skills and Behavior. (PO 110-1) B. Alexander, C. Rice, University of Cincinnati, Cincinnati, OH.

2:20 p.m.

Pimex — A Successful Tool for Risk Communication in the Netherlands (New Developments). (PO 110-2) A. Winkes, P. Beurskens, J. Willems, K. Verbist, Arbo Unie Expert Center for Chemical Risk Management, Nijmegen, Netherlands.

2:40 p.m.

GHS SDSs: It's More Than Just Dropping the 'M'. (PO 110-3) J. Dipper, J. Chappel, CCOHS, Hamilton, ON, Canada.

3:00 p.m.

Developing a Culture with a Foundation of Recognition. (PO 110-4) T. Efir, Caterpillar Safety Services, Portland, OR.

3:20 p.m.

Progress in the Development of a Canadian Workplace Exposure Database. (PO 110-5) A. Hall, H. Davies, P. Demers, C. Peters, A. Nicol, CAREX Canada, Vancouver, BC, Canada.

3:40 p.m.

Eliminating Preventable Vehicle Incidents through a Process of Employee Involvement. (PO 110-6) T. Efir, Caterpillar Safety Services, Portland, OR.

4:00 p.m.

Using ANSI Z10 as a Program Assessment Tool. (PO 110-7) A. Sheaffer, J. Yasalonis, LMI, Belcamp, MD.

4:20 p.m.

Using EHS Business Value Tools for Strategic Program Planning/Development. (PO 110-8) D. Downs, EHS Management Partners, LLC, Shorewood, MN.

4:40 p.m.

Utilizing OHSAS 18001 Model for Occupational Hazards Reduction at Mining and Metallurgy Facilities in Central Asia. (PO 110-9) A. Korchevskiy, E. Rasmuson, J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

RT 208

Building a Green Laboratory in the 21st Century

2:00 p.m.–5:00 p.m. + OCC, C121

Arranger: L. Poore, University of Kentucky, Lexington, KY. **Moderator:** M. Russell, AECOM, Middleton, WI. **Monitors:** L. Poore, University of Kentucky, Lexington, KY; L. Wong, University of California, San Francisco, San Francisco, CA.

Several systems now exist to facilitate the development of "green" laboratories. The LEED (Leadership through Environmental and Engineering Design) system developed by the U.S. Green Building Council is one of the more established and widely recognized systems. However, the Green Globes program established by the Green Building Initiative (GBI) is another more recent system that has been created in conjunction with ANSI (American National Standards Institute) that may be more user friendly and less expensive. Then there is the Labs21 program, EPA's Energy Star program, and a host of other systems. How should a company/institution decide what guidance to follow? What is the role of the industrial hygienist in promoting laboratory sustainability? This session will explore these topics and include specific examples of projects employing green methodologies.

+ Technical Program: Monday

- + **Design Considerations for a LEED Gold-Certified Research Laboratory.** K. Mussler, CMTA Engineers, Lexington, KY.
- + **Green Globes Certification and Its Application to Green Laboratory Design.** S. Rekow, GBI, Portland, OR.
- + **Labs21 and the Lawrence Berkeley National Laboratory (LBNL) Approach to Energy Savings.** P. Wirdzek, I2SL, Annandale, VA.
- + **Establishing EH&S Specifications for Safe and Energy Efficient Laboratories.** T. Smith, Exposure Control Technologies, Inc., Cary, NC.
- + **Perspectives on Green Laboratories.** S. Lengerich, Eli Lilly and Company, Indianapolis, IN.

RT 209

Environmental Noise: 35 Years and Counting — Implications for Industrial Hygiene

2:00 p.m.–5:00 p.m. + OCC, F152

Arranger: J. Banach, Quest Technologies, Inc., Oconomowoc, WI. **Moderator:** E. Berger, 3M Company, Indianapolis, IN. **Monitors:** J. Cisna, Portland General Electric, Portland, OR; L. Hager, 3M Company, St. Paul, MN.

For the industrial hygienist, noise challenges don't stop at the walls of the facility or even at the property line. Frequently, since the industrial hygienist has the sampling technique skills to apply and the knowledge of noise and its measurement they are called on to deal with property line complaints from neighbors and with planning responsibilities when facilities expand or build new locations. It has been 35 years since the EPA issued its initial call for quiet communities. Issues include vague localized regulations, measurement parameters and techniques different from worker exposure assessment, control approaches, and unique noise sources. This presentation takes a look back and provides a variety of perspectives looking forward to equip the industrial hygienist to manage environmental noise issues.

- + **A Historical Perspective and a Future Vision on Environmental Noise Regulation.** L. Bloomberg, Noise Pollution Clearing House, Montpelier, VT.
- + **Unique Measurement Challenges for Environmental Noise.** J. Banach, 3M Company, Oconomowoc, WI.
- + **Predicting DNL from Population Density and Annoyance from DNL.** P. Schomer, Schomer and Associates, Champaign, IL.

- + **Engineering Controls for Environmental Noise: A Brief Retrospective and a Look to the Future.** D. Driscoll, Associates in Acoustics, Inc., Evergreen, CO.
- + **Perspectives in Running a Noise Control Program and an Overview of International Standards.** P. VanOrden, City of Portland, Portland, OR.

RT 210

Living with Differences: Addressing Standards for Respirator Selection/Use Worldwide

2:00 p.m.–5:00 p.m. + OCC, F149

Arranger: S. Smith, 3M Company, Brockville, ON, Canada. **Moderator:** R. Weber, 3M Company, St. Paul, MN. **Monitors:** S. Graham, U.S. Army, Aberdeen Proving Ground, MD; P. Swearngen, Avon Protection Systems, Cadillac, MI.

Organizations with global operations face a significant issue when addressing differences that exist between regional standards for selection and use of respiratory protective equipment. Exactly the same equipment can have different assigned protection factors or limitations for use depending on the country or region of use, and management of its deployment is consequently complicated. This roundtable presents current experiences from major corporations, compares standards and needs across the world, discusses ISO standard implementation and proposes strategies for respiratory protective equipment deployment by multinational organizations.

- + **Applying Global Occupational Hygiene Practices Across Multiple Jurisdictions.** J. Smith, ExxonMobil Corporation, Houston, TX.
- + **A Corporate-Wide Occupation Hygiene Management System.** M. Murphy, 3M Company, St. Paul, MN.
- + **Respirator Selection and Use Standards in Europe and the Impact of ISO Standard Introduction.** A. Capon, Avon Technical Products, UK; M. Clayton, Health and Safety Laboratory, Buxton, United Kingdom.
- + **The Regulatory Environment for Respirator Selection and Use in Asia.** T. Mehta, International Safety Systems, Inc., Washingtonville, NY.
- + **Standards in North America — Application and Future Change.** J. Steelnack, OSHA, Washington, DC.

- + **Respirator Selection and Use Standards in Europe and the Impact of ISO Standard Introduction.** M. Clayton, Health and Safety Laboratory, Buxton, United Kingdom.

RT 211

Glen Williamson Forum: OSHA's Most Interesting Health Cases, 2008–2010

2:00 p.m.–6:00 p.m. + OCC, Oregon 201

Arranger: C. Coe, OSHA, Atlanta, GA. **Moderator:** R. Fairfax, OSHA, Washington, DC. **Monitors:** C. Coe, OSHA, Atlanta, GA; C. Payne, OSHA, Jackson, MO.

The forum is in honor of the former OSHA Region VI Deputy Regional Administrator who died suddenly at the age of 49 in September 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 the control methods and solutions. Cases 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 and 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.

- + **Trichloroethylene Overexposure in the Automotive Stamping Industry.** F. Strelec, OSHA, North Syracuse, NY.
- + **Acute Exposures to Paranitroaniline during Powder Transfer.** J. Sternes, OSHA, Peoria, IL.
- + **Health Hazards Associated with "Ice Blasting" in Confined Spaces.** D. DeWees, OSHA, Concord, NH.
- + **Methyl Ether Toxicity during a Rail Car Entry at a Biodiesel Fuel Facility.** J. Vicory, OSHA, Kansas City, MO.
- + **Lead Overexposures in the Manufacture of Diving Weights.** S. Kapitzke, OSHA, Jacksonville, FL.
- + **Diacyl Exposure at a Food Flavoring Manufacturing Operation.** K. Lee, OSHA, Milwaukee, WI.
- + **Explosive Water in a Municipal Water Storage Tank.** M. Jarvis, OSHA, Austin, TX.

- + **Dental Office Nitrous Oxide Exposure.** H. Ioset, OSHA, North Syracuse, NY.
- + **Legionella Perils at a Foundry.** M. Wacker, OSHA, Madison, WI.
- + **Arsenic Fume Overexposures during Boiler Steam Tube Replacement.** R. Bennett, OSHA, Mobile, AL.

RT 212

Nanotechnology: Advances in Medical Surveillance and Occupational Health

2:00 p.m.–6:00 p.m. + OCC, Oregon 203

Arranger: D. Ewert, OSO BioPharmaceuticals Manufacturing, LLC, Albuquerque, NM.

Moderator: M. Hoover, NIOSH, Morgantown, WV. **Monitors:** M. Rosenow, Argonne National Laboratory, Argonne, IL; R. Lally, University of California Irvine, Irvine, CA.

Inherent problems with nanotechnology and engineered nanomaterials are the uncertainties associated with health effects and the need to develop robust medical management systems. This session, and an associated panel discussion, will address real world approaches to cataloging worker health and medical surveillance. Currently, there are a number of organizations promoting occupational health registries and enhanced medical management. By strategically streamlining the data collection process and management of care, organizations with engineered nanoparticle exposures can become key participants to this community of practice. To facilitate this goal, the roundtable brings together a number of recognized experts from toxicology, medicine and industrial hygiene to discuss these topics as well as many others. Attendees will not only gain the opportunity to learn from current approaches but acquire the tools necessary to develop their own. In addition to guidance in fundamentals, this session provides participants with an update on Medical Surveillance, Exposure Registries, Epidemiologic Research and innovative methods for conducting toxicology studies.

- + **Medical Surveillance for Nanotechnology Workers.** D. Trout, NIOSH, Cincinnati, OH.
- + **A Critical View of Medical Surveillance for Nanomaterial Workers.** M. Fischman, Intel Corporation, Walnut Creek, CA.
- + **Occupational Health Strategies for Workplace Exposure to Nanomaterials.** M. Kosnett, University of Colorado, Denver, CO.

- + **The Occupational Medicine — Industrial Hygiene Interface in DOE Facilities.** B. Stockmeier, Argonne National Laboratory, Argonne, IL.
- + **Nanotechnology: New Nanoscale Tools for Assessing Toxicity of Nanoscale and Macroscale Products.** J. Hussey, NanoInk, Inc., Skokie, IL.
- + **Managing Worker Medical Information: A Panel Discussion.** D. Ewert, OSO BioPharmaceuticals Manufacturing, Albuquerque, NM.

RT 213

Occupational Exposure Limits: Global and Domestic Perspectives from Across the Field

2:00 p.m.–6:00 p.m. + OCC, Oregon 204

Arranger and Moderator: A. Weinrich, US EPA, Cincinnati, OH. **Monitors:** S. Musson, US EPA, Cincinnati, OH; K. Still, Occupational Toxicology Associates, Hillsboro, OR.

This roundtable brings together science leaders from ten international and US government and private sector organizations that derive and apply occupational exposure limits (OELs). These leaders will present and discuss various aspects of the principles and science used in setting occupational exposure limits. The roundtable will emphasize scientific methods, both conceptual and general, and include evolutions in processes for defining and setting OELs as new methods and operating procedures are introduced. However, policy implications of such scientific decisions also will be considered.

- + **Science-Based, Economics-Based, or Baseless: When Will We Set Risk-Based OELs?** A. Finkel, University of Pennsylvania, Philadelphia, PA.
- + **The OSHA Permissible Exposure Limits.** N. Hauter, OSHA, Washington, DC.
- + **The ASTM E34 Voluntary Consensus Standards Process for Developing OELs.** T. Slavin, Navistar Inc., Chicago, IL.
- + **Environmental and Occupational Exposure Limits for PAHs in China.** X. Duan, Chinese Research Academy of Environmental Sciences, Beijing, China.
- + **WITHDRAWN The MAK Approach for Setting OELs in Germany.** A. Hartwig, Karlsruhe Institute of Technology, Karlsruhe, Germany.
- + **NIOSH Contributions to OEL Development.** P. Schulte, NIOSH, Cincinnati, OH.

- + **The Japan Society for Occupational Health OELs: Hot Topics and Current Approaches.** M. Ikeda, Kyoto Industrial Health Association, Nakagyo-ku, Kyoto, Japan.
- + **Approaches and Methods in Setting the Workplace Environmental Exposure Levels (WEELs).** A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH.
- + **The ACGIH® TLVs® for Chemical Substances.** T. Gordon, New York University, Tuxedo, NY.
- + **The U.S. NRC Acute Exposure Guideline Levels (AEGs).** E. Falke, Acute Exposure Guideline Levels Program, Washington, DC.

RT 214

OSHA's Injury and Illness Prevention Program Rulemaking

2:00 p.m.–6:00 p.m. + OCC, B113

Arranger: C. Redinger, Redinger EHS, Inc., Harvard, MA. **Moderator:** D. Dougherty, OSHA, Washington, DC. **Monitors:** B. Perry, OSHA, Washington, DC; L. Iverson-Leirmo, Gunderson Lutheran Medical Center, Viroqua, WI.

OSHA is developing a standard that would require employers to establish and maintain an Injury and Illness Prevention Program (I2P2). It involves identifying and controlling hazards as well as planning, implementing, evaluating, and improving processes and activities that protect employee safety and health. OSHA has substantial data on reductions in injuries and illnesses from employers who have implemented similar effective processes. Currently, 12 states, including California, Oregon and Washington have related rules. The preliminary draft I2P2 rule builds on these guidelines and on lessons learned from successful approaches and best practices under OSHA's Voluntary Protection Program, Safety and Health Achievement Recognition Program and similar industry and international initiatives such as ANSI/AIHA Z10 and OSHA's 18001. Roundtable speakers will present details about the proposed rule, empirical research on systematic approaches to worker safety and health, along with case examples and best practices. The AIHA's I2P2 Task Force recommendations and outreach efforts to support the proposed rule will be presented.

- + **Injury and Illness Prevention Programs: An OSHA Overview.** M. Seymour, OSHA, Washington, DC.

+ Technical Program: Monday

- + **What Do Workers Need for an Injury and Illness Prevention Program to Be Effective?** B. Kojola, AFL-CIO, Washington, DC.
- + **AIHA I2P2 Guidance to OSHA — White Paper and Position Statement — and Consensus-Building Activities.** C. Redinger, Redinger EHS, Inc., Harvard, MA.
- + **Traditional Mismanagement Systems Don't Work.** J. Howe, ANSI/AIHA Z10 Chair, Medford, OR.
- + **Experience with Existing State Programs: What Have We Learned?** J. Mendeloff, RAND Center - CHSW, Pittsburgh, PA.
- + **A Model of Safety and Health Program Excellence that Works.** R. Layne, VPPPA, Falls Church, VA.
- + **Making the Case for I2P2 in Small Workplaces and Implementation Best Practices.** G. Miller, MM&A LLC, Matthews, NC.

Due to circumstances beyond our control, AIHce cannot guarantee the appearance of all presenters listed in this program. Registration fees will not be refunded due to speaker changes; we regret any disappointment.

SS 001

Science Symposium: Inhalable Particles — The State of the Science on a Big Particle Problem

2:30 p.m.–5:30 p.m. + OCC, Oregon 202

Arranger: J. Volckens, Colorado State University, Fort Collins, CO. **Moderator:** S. Paik, Lawrence Livermore National Laboratory, Livermore, CA. **Monitors:** M. Isenstein, U.S. Army, Aberdeen Proving Ground, MD.; C. Chen, College of Public Health, Taipei, Taiwan.

- + **The Science of Inhalable Particles.** J. Volckens, Colorado State University, Fort Collins, CO; G. Liden, Stockholm University, Stockholm, Sweden.
- + **How Well Do Personal Aerosol Samplers Meet the Inhalable Sampling Convention?** D. Sleeth, University of Utah, Salt Lake City, UT.
- + **Exposure Reconstruction: How to Relate Total and Inhalable Dust Exposures.** R. Anthony, University of Iowa, Iowa City, IA.
- + **What to Expect in Inhalable Exposure Limit Development.** L. Brosseau, University of Minnesota, Minneapolis, MN.
- + **So, You Decided to Adopt Inhalable Samplers: Lessons Learned from the Field.** M. Harper, NIOSH, Morgantown, WV.
- + **Particle Inhalability: The Road Ahead.** J. Volckens, Colorado State University, Fort Collins, CO.

CR 306

Emergency Management and EHS: We've Come a Long Way in 10 Years

3:30 p.m.–4:30 p.m. + OCC, B110

Presenter: E. Clas, Clas Consulting LLC, Norfolk, MA. **Moderator:** M. Heaney, ohsm, LLC., Louisville, CO. **Monitor:** K. Tonn, University of Illinois, Chicago, IL.

Emergency response and recovery has come a very long way in 10 years! Ms. Clas has been at each of the three largest disasters during that time and will discuss her impressions of where we have matured as safety and health professionals over that period. Topics will include the use of the incident command system, national response framework, safety and health annex.

CR 307

Overview of Recent Substantive Federal Environmental, Health, and Safety Rulemaking

3:30 p.m.–4:30 p.m. + OCC, B119

Presenter: G. Tichenor, Stoel Rives LLP, Portland, OR.

This presentation reviews federal environmental, health, and safety (EH&S) rulemakings in the last year. As EH&S professionals we need to be up-to-date with changes to the federal regulations. This presentation looks at rulemakings with a broad scope of application, applying across industries and sectors, rather than looking at rules that may apply only to certain interests. This presentation will help attendees “catch up” with what has been going on in federal rulemaking over the last 12 months.

Celebrate the 40th Anniversary of the OSH Act

Special recognition at the Wednesday General Session
OSHA and NIOSH staff requested to attend.

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+ At-a-Glance: Tuesday

Tuesday, May 17

6:30 a.m.-8:00 a.m.

AIHF Fun Run/Walk
Ankeny Pavilion, Waterfront

7:00 a.m.-5:30 p.m.

Registration and Hotel Reservations
OCC, Lobby A

7:30 a.m.-5:00 p.m.

Press Room
OCC, D132

Volunteer Collaboration Café
OCC, Lobby C

7:30 a.m.-5:30 p.m.

Speaker Ready Room
OCC, C124

8:00 a.m.-9:00 a.m.



General Session: Green Chemistry: A Strategic Opportunity for Industrial Hygiene

Michael P. Wilson, PhD, MPH, Berkeley Center for Green Chemistry,

University of California, Berkeley, CA.
OCC, Portland Ballroom

8:00 a.m.-4:00 p.m.

AIHA CareerAdvantage Development Fair 2011
OCC, Hall A

9:00 a.m.-Noon

ST-03 City Art Trek
Walk starts at the Hilton; meet at 9:00 a.m. in the Main Lobby, 6th St.

WD 501 2nd International Symposium on Wood Dust: Health Effects and Exposure Studies

OCC, A108

9:00 a.m.-3:00 p.m.

Visit the Expo!
OCC, Halls B-E

Daily Prizes, Special Displays, Cyber/Message Centers, Restaurants, Lounges, Expo Theater

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

9:00 a.m.-3:00 p.m.

Poster Sessions
OCC, 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.

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

TT-03 East Side Plating, Inc.
OCC, Bus departs MLK entrance; board by 9:15 a.m.

9:30 a.m.-2:00 p.m.

Exhibitor Product Demos and Presentations
Expo Theater, Hall D
See presentation descriptions on pages 52 and 59.

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

Upton Sinclair Memorial Lecture for Outstanding EHS Investigative Reporting
OCC, Oregon 202

CR 308 Hazardous Materials Shipping and Transportation
OCC, B110

CR 309 Safety Culture: Motivation and Influence
OCC, D138

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

PO 111 Field Detection, Sampling and Analysis: Real-Time Detection Systems
OCC, A106

PO 112 Healthcare Industries I: Exposure Assessment and Control
OCC, F149

PO 113 Risk Management Planning and Prevention
OCC, D136

RT 215 Ask the Expert: An Update on the NIOSH Nanotechnology Research Program
OCC, Oregon 204

RT 216 Federal Environmental Lead Programs Update
OCC, B113

RT 217 Integrating Safety and Health into Green Construction: From Concept to Case Study
OCC, F152

RT 218 Managing Radiation Surprises and a Memorial Tribute to Dr. Herman Cember
OCC, B116

RT 219 Today's Global Chemical Regulatory Shifts: Are We Leading or Following?
OCC, Oregon 201

10:30 a.m.-12:50 p.m.

PO 114 Personal Protective Clothing and Equipment
OCC, Oregon 203

PO 115 Computer Applications
OCC, C121

10:30 a.m.-1:00 p.m.

RT 220 Perspectives on Preparation for the CIH Exam--Version 5.0
OCC, D139

11:00 a.m.-Noon

The Exposome: The Future of Exposure Science?
OCC, C126

11:30 a.m.-12:30 p.m.

CR 310 OSHA Construction and General Industry Standards: Why You Need to Understand Both
OCC, B119

Noon-1:00 p.m.

WD 504 2nd International Symposium on Wood Dust: Wood Dust Poster Session
OCC, Hall B

12:30 p.m.-1:30 p.m.

Luncheon Discussions: NIOSH Table Talks
OCC, Expo, Hall D

William P. Yant Award Lecture
OCC, Oregon 202

12:30 p.m.-2:00 p.m.

Unsolved IH Mysteries Workshop
OCC, D133

12:30 p.m.-5:30 p.m.

ST-04 "DeVine" Wines
Depart the OCC MLK Lobby at 12:15 p.m. and the Hilton, 6th St., at 12:30 p.m.

1:00 p.m.-5:00 p.m.

ST-05 By Gorge!
Depart the Hilton, 6th St., at 12:45 p.m. and the OCC MLK Lobby at 1:00 p.m.

1:30 p.m.-5:30 p.m.

TT-04 Intel Corporation
OCC, Bus departs MLK entrance; board by 1:15 p.m.

2:00 p.m.-3:00 p.m.

CR 311 Culture and Exposure Control
OCC, D139

CR 312 Lessons Learned from Teaching Lead RRP, and an Update on EPA's Rule
OCC, D138

2:00 p.m.-4:30 p.m.

RT 221 Addressing the Hazards of New and Emerging Issues within the Workplace
OCC, Oregon 202

RT 222 Fit-Testing Hearing Protection Devices: Technology, Application, and Implementation
OCC, B113

RT 223 Healthcare Construction: Moving Forward
OCC, B119

RT 224 International Ergonomic Analysis Tools and Standards: Beyond Our Borders
OCC, F152

RT 225 NFPA 70E — Understanding Requirements, Relationships and Responsibilities
OCC, A106

SS 002 Science Symposium: Emerging Exposure Assessment Methods for Occupational Epidemiology Studies
OCC, F149

2:00 p.m.-5:00 p.m.

PO 116 Respiratory Protection I
OCC, C121

RT 226 Green Chemistry: Opportunities for the Industrial Hygienist
OCC, Oregon 204

WD 502 2nd International Symposium on Wood Dust: Health Effects and Limit Values
OCC, A108

2:00 p.m.-5:20 p.m.

PO 117 Indoor Environmental Quality I
OCC, D136

2:00 p.m.-6:00 p.m.

PO 118 Industrial Hygiene General Practice
OCC, B110

RT 227 Integrated Solutions in Sustainable Occupational Health and Safety Management Systems
OCC, B116

RT 228 NIOSH Health Hazard Evaluations: Results of Recent Industrial Hygiene Evaluations
OCC, Oregon 203

RT 229 OSHA's Response to the Deepwater Horizon Oil Spill
OCC, Oregon 201

2:30 p.m.-3:00 p.m.

AIHA Government Affairs Update
OCC, D133

3:30 p.m.-4:30 p.m.

CR 313 TSCA Regulatory Compliance: Challenges and Solutions
OCC, D139

AIHA®

8:00 a.m.-11:00 a.m.

ANSI/AIHA Z9.12 Subcommittee Meeting
OCC, D131

8:30 a.m.-9:30 a.m.

Exposure Assessment Committee Roundtable Meeting
OCC, E145

9:00 a.m.-10:00 a.m.

Dermal Project Team Meeting
OCC, E148

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

Engineering Committee Meeting
OCC, E143

Environmental Issues Committee Meeting,
OCC, E142

Exposure Assessment Strategies Committee Meeting
OCC, E145

Management Committee Meeting
OCC, E141

Publications Committee Meeting
OCC, E144

10:00 a.m.-Noon

Practice, Standards and Guidelines Committee Meeting
OCC, E147

Noon-1:00 p.m.

Blue Council Meeting
OCC, E144

Green Council Meeting
OCC, E142

Indigo Council Meeting
OCC, E148

1:00 p.m.-3:00 p.m.

Aerosol Technology Committee Meeting
OCC, E143

Communication and Training Methods Committee Meeting
OCC, E141

Engineering Industry SIG Meeting
OCC, E147

Note Meeting Rooms . . .

OCC = Oregon Convention Center

Green Building Working Group Meeting
OCC, E145

Laboratory Health and Safety Committee Meeting
OCC, E146

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

Sampling and Laboratory Analysis Committee Meeting
OCC, E144

2:00 p.m.-4:00 p.m.

Student Local Sections Council Business Meeting
OCC, E142

3:00 p.m.-4:00 p.m.

AIHce Exhibitor Advisory Group Meeting
OCC, VIP Suite D

3:30 p.m.-5:30 p.m.

Clandestine Laboratory Working Group Meeting
OCC, E141

Computer Applications Committee Meeting
OCC, E143

Law Committee Meeting
OCC, E148

Minority SIG Meeting
OCC, E147

Nanotechnology Working Group Meeting
OCC, E146

4:00 p.m.-6:00 p.m.

Local Section Council Business Meeting
OCC, E145

Value Strategy Project Team Meeting
Hilton, Forum Suite

6:30 p.m.-7:30 p.m.

MSA/AIHA Reception
Hilton, Grand Ballroom

AIHF

3:30 p.m.-5:30 p.m.

AIHF Board of Trustees Meeting
Hilton, Council Suite

JOEH

4:00 p.m.-6:00 p.m.

JOEH LLC Board Meeting
Hilton, Cabinet Suite

+ At-a-Glance: Tuesday

Ancillary

6:30 a.m.-8:00 a.m.

Lockheed Martin Industrial Hygiene
Breakfast

Doubletree, Halsey

1:30 p.m.-5:30 p.m.

12th Annual DoD Industrial Hygiene Forum
Red Lion, Grand Ballroom

2:00 p.m.-3:30 p.m.

OSHA Compliance Officers' Forum on Field
Equipment Evaluation sponsored by OSHA
Cincinnati Technical Center
Doubletree, Helens

3:00 p.m.-5:00 p.m.

CRBOH AGM / Reception
(by invitation only)
Hilton, Broadway III

4:00 p.m.-6:00 p.m.

University of Cincinnati-Academy of
Kettering Fellows
Hilton, Galleria South

4:30 p.m.-6:00 p.m.

University of Central Missouri Alumni and
Friends
Hilton, Alexanders, 23rd Floor

4:30 p.m.-6:30 p.m.

University of Michigan Reception
Hilton, Pavilion Ballroom East

Wayne State University Occupational and
Environmental Health Sciences Alumni
Reception
Hilton, Directors Suite

4:45 p.m.-6:15 p.m.

University of Arizona Alumni Reception
Monaco, Red Star Club Room

5:00 p.m.-6:30 p.m.

University of Washington Alumni and
Friends Reception
Hilton, Pavilion Ballroom West

5:30 p.m.-7:30 p.m.

University of Minnesota School of Public
Health's Industrial Hygiene Reunion
*Jupiter Hotel, DreamBOX Room,
800 E. Burnside, Portland*

7:00 p.m.-8:15 p.m.

Purdue University Alumni Reception
Hilton, Studio Suite

7:00 p.m.-10:00 p.m.

ICU-A Total Safety Company Reception
Hilton, Broadway



EXPOSURE
RISK ASSESSMENT
AND MANAGEMENT

STEWARDSHIP
AND SUSTAINABILITY

PUBLIC SAFETY

LEADERSHIP

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+ Technical Program: Tuesday

GENERAL SESSION



8:00 a.m.–9:00 a.m.
OCC, Portland Ballroom

Green Chemistry: A Strategic Opportunity for Industrial Hygiene

Michael P. Wilson, PhD, MPH

Associate Director for Integrative
Sciences
Berkeley Center for Green
Chemistry, University of California
Berkeley, CA

Seventy-four billion pounds of industrial chemicals enter the United States daily. Many are toxic, and most will survive long-term to impact life on earth. Global chemical production will double in the next 24 years.

Dr. Michael Wilson defines the cutting-edge of the emerging field called green chemistry. The principles of green chemistry include the need to design safer chemicals and products. This benign-by-design approach incorporates consideration of chemicals' effects on public health and the environment.

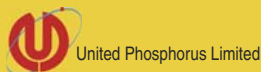
Dr. Wilson has advanced the work of green chemistry and chemicals policy at state and national levels. The author of numerous published articles in scientific, technical and public policy journals, Dr. Wilson has also testified before the United States Senate Committee on Environment and Public Works.

Among a number of topics, Dr. Wilson will discuss:

- + How green chemistry provides a long-term approach to reducing environmental damage and worker exposure to hazardous chemicals at the earliest stage of development;
- + Scientific, technical and public policy challenges;
- + The industrial hygiene role in helping business understand green chemistry's potential for reducing or eliminating worker exposures, improving product stewardship and innovation, and accelerating competitive advantage.

Immediately following his presentation, Dr. Wilson will host a 20 minute Q&A session. Attendees who stay will be asked to move to the front. Dr. Wilson will also participate in roundtables 219 and 226.

This general session is sponsored by



Showtime 7:45 a.m. — Boka Boys

Blending baritone, tenor, and soprano marimbas, Boka Boys are a high-energy, African style band with a unique, irresistible sound. Start your morning with their upbeat, danceable, fun-to-watch music!

Exhibitor Product Demos and Presentations

9:30 a.m.–1:00 p.m. + Expo Theater, Hall D

9:30 a.m.

Creating a Calibrated Exposure Chamber to Verify the Performance of Air Samplers and Respirator Cartridges, Assay Technology Inc./AT Labs/Miller Nelson (MNR)

The new Miller-Nelson HCS-501 Atmosphere Generator emits a flowing atmosphere at a controlled flow rate, temperature and humidity into which pure solvents or gases may be infused at a controlled rate, using a volumetric syringe or mass flow controllers. The kinetic atmosphere thus created passes through a rectangular acrylic box filter with Reference Samplers and Test Samplers. Test Samplers or Respirators may be evaluated by comparison to the Reference Samplers according to tried-and-true statistical methods. Respirators must be evaluated by comparison to the NIOSH SOPs and other testing protocols.

10:00 a.m.

New Products Developments in XRF Analysis, Thermo Scientific — Air Quality Instruments and Niton Analyzers

The new Thermo Scientific Niton FXL field X-ray lab is a new solution for an observed field analysis need, providing higher analytical capability in a convenient package. Many users of hand-held XRF instruments can be observed exclusively using them in test stands. The Niton FXL was developed for this audience's need for portable analysis at a fixed location. We will display this instrument analyzing environmental samples and educate on the technical capabilities of XRF technology.

Noon

Explosion Proof/Dust Ignition Proof Vacuum Cleaner System, Tiger-Vac Inc. USA

EXPI- 35 L DT MRP HEPA – Legally certified explosion proof/dust ignition proof vacuum cleaner with cyclonic vacuuming. Less than 10 ohms resistivity. No cloth filters to wash, it contains a 40-square-foot conductive spun bond polyester filter cartridge with PTFE membrane with a 99.95% efficiency on .5 micron. Its unique manual reverse purge system easily dislodges particles that cling to the filter media by simply opening the purge valve to allow ambient air to flow inside the filter media and blast off even hygroscopic particles. HEPA/ULPA filtration, 99.999% on .12 micron efficiency. The 9-gallon detachable recovery tank includes a conductive poly liner for the safe and easy disposal of recovered materials.

12:30 p.m.

EVA — The Latest in Powered Air-Purifying Respirator Technology, Bullard

Greg Steller, National Accounts Manager, will discuss Bullard's EVA PAPR system and demonstrate the latest technology available in the respiratory protection market. The EVA PAPR incorporates many features customers have asked for and has set Bullard apart as an industry leader. Lithium ion batteries, a visible fuel gauge, low flow and low battery alarm, as well as a two-speed blower are just some of the advantages provided by this unique product. Bullard also offers a wide variety of head tops.

2nd International Symposium on Wood Dust

Tuesday, May 17: 9:00 a.m.–5:00 p.m. and
Wednesday, May 18: 9:00 a.m.–1:00 p.m.

The 1st International Congress on Wood Dust: Challenges for Occupational Risk Assessment and Management was held in 2006 at the Palais des Congrès in Strasbourg, France. The goal of the 2nd International Symposium is to bring together researchers, industrial hygienists, practitioners of occupational medicine, toxicologists, and government officials to discuss the latest developments in particle characterization, sampling and analysis, exposure assessment, human health effects, toxicology and biological mechanisms, epidemiology and risk assessment, and risk management controls.

Wood Dust is implicated in an increased prevalence of certain workplace respiratory symptoms and diseases. However, the action mechanism of wood dust at the molecular, cellular or tissue level to produce these symptoms and diseases is not well understood. Recent estimates in 25 countries suggest 3.6 million workers are exposed to wood dust, with one-third employed in construction carpentry. In France, Decree No. 2003-1254 set an inhalable limit for wood dust in workplaces at 1 mg/m³ coming into force in 2005.

Also in 2005, ACGIH* confirmed the same value as their threshold limit value (TLV) for wood dust, and the NIOSH Recommended Exposure Limit (REL) is also 1 mg/m³. Sixty-two percent (62%) of the estimated total of exposed workers (2.2 million) in Europe are thought to be exposed above this value. Both the numbers of workers exposed and the exposure levels are considered to be similar in North America. It is estimated in Europe that 79% of the exposed construction workers which represent 9% of all construction workers, are exposed daily to more than 1 mg/m³ of inhalable wood dust.

Tuesday, May 17

WD 501

Health Effects and Exposure Studies

9:00 a.m.–Noon + OCC A108

Arrangers and Moderators: M. Harper, NIOSH, Morgantown, WV; P. Görner, INRS, Vandoeuvre, France. **Monitor:** S. Kim, NIOSH, Morgantown, WV.

9:20 a.m.

Estimation of Wood Dust Exposure in Small and Medium-Sized Companies in Germany. (WD 501-1) J. Schulze, Berufsgenossenschaft Holz und Metall, Bielefeld, Germany.

9:40 a.m.

Longitudinal Investigation of Respiratory Health of Workers Exposed to Components of Industrial Wood Processing Dust. (WD 501-2) R. Rando, L. Freyder, J. Lefante, R. Jones, H. Glindmeyer, Tulane University, New Orleans, LA.

10:00 a.m.

Cross-shift Airway Responses and Long-term Decline in FEV1 Among Wood Dust Exposed Workers. (WD 501-3) G. Jacobsen, Herning Hospital, Herning, Denmark; T. Sigsgaard, V. Schlünssen, Aarhus University, Aarhus, Denmark; I. Schaumburg, Aarhus University Hospital, Aarhus, Denmark.

10:40 a.m.

Cross Shift Lung Function Among Operators in Wood Pellets Production. (WD 501-4) E. Andersson, Sahlgrenska University Hospital, Gothenburg, Sweden; H. Arvidsson, I. Bryngelsson, K. Hagström, Örebro University Hospital, Örebro, Sweden; K. Eriksson, University Hospital of Umeå, Umeå, Sweden.

11:00 a.m.

Cumulative Soft Tissue Paper Dust Exposure and Lung Function Among Workers. (WD 501-5) E. Andersson, G. Sallsten, S. Lohman, F. Taube, K. Torén, Sahlgrenska University Hospital, Gothenburg, Sweden.

11:20 a.m.

Ige-mediated Sensitisation to Pine and Beech Wood Dust in Relation to Dust Exposure Levels and Respiratory Symptoms—The Impact of Cross-reactive Carbohydrate Determinants (CODs). (WD 501-6) V. Schlünssen, G. Jacobsen, T. Sigsgaard, Aarhus University, Aarhus, Denmark; S. Kespohl, M. Raulf-Heimsoth, S. Meurer, U. Meurer, T. Brüning, Institute of the Ruhr University Bochum, Bochum, Germany; I. Schaumburg, Aarhus University Hospital, Aarhus, Denmark.

11:40 a.m.

Work-Related Asthma due to Wood Dust — California 1993-Present. (WD 501-7) J. Weinberg, E. Martysh, C. Espineli, California Department of Public Health/Public Health Institute, Richmond, CA; J. Flattery, R. Harrison, California Department of Public Health, Richmond, CA.

WD 504

Wood Dust Posters, Hall B

Authors are present to discuss their research from Noon–1:00 p.m. See page 92 for poster listings.

WD 502

Health Effects and Limit Values

2:00 p.m.–5:00 p.m. + OCC A108

Arrangers and Moderators: M. Harper, NIOSH, Morgantown, WV, P. Görner, INRS, Vandoeuvre, France. **Monitor:** E. Lee, NIOSH, Morgantown, WV.

2:00 p.m.

Airway Reactivity and Health-related Quality of Life in Western Red Cedar Asthmatics Removed From Exposure. (WD 502-1) J. He, M. Chan-Yeung, C. Carlsten, University of British Columbia, Vancouver, BC, Canada.

2:20 p.m. WITHDRAWN

2:40 p.m.

Molecular Mechanisms in Wood-dust Related Sinonasal Cancer: TP53 Mutations. (WD 502-3) K. Husgafvel-Pursiainen, Finnish Institute of Occupational Health, Helsinki, Finland.

3:00 p.m.

IARC's Most Recent Evaluation of Wood Dust. (WD 502-4) P. Demers, Occupational Cancer Research Centre, Cancer Care Ontario, Toronto, ON, Canada.

3:40 p.m.

Risk Assessment for Occupational Wood Dust Exposure: Evaluation by the Scientific Committee for Occupational Exposure Limits (SCOEL) of the European Union. (WD 502-5) H. Bolt, Leibniz Research Centre for Working Environment and Human Factors (IfAdo), Dortmund, Germany.

4:00 p.m.

The ACGIH Threshold Limit Value for Wood Dust. (WD 502-6) L. Brosseau, University of Minnesota, Minneapolis, MN.

4:20 p.m.

The Cal/OSHA PEL for Wood Dust and How It May Change. (WD 502-7) S. Smith, OSHA, Sacramento, CA.

4:40 p.m.

Occupational Exposure to Wood Dust in France: Current Situation and Planned Actions. (WD 502-8) R. Vincent, INRS, Vandoeuvre les Nancy Cedex, France; F. Teze, D. Lamy, O. Calvez, Direction générale du travail, Paris, France.

Program continues on Wednesday, May 18.
See page 69 for details.

Symposium Co-Chairs:

- + Dr. Martin Harper, CIH, NIOSH
- + Dr. Peter Görner, INRS (France)

Symposium Sponsors



+ Technical Program: Tuesday

11th Annual Upton Sinclair Memorial Lecture for Outstanding EHS Investigative Reporting

“Why Should I Care?” Humanizing Worker Safety in the Media

10:30 a.m.–11:30 a.m. + OCC, Oregon 202



Lecturer: Jim Morris, Center for Public Integrity, Washington, DC.

While occupational safety and health professionals know firsthand the devastating toll taken

by traumatic injuries and chronic diseases in the workplace, making readers of the mainstream media — and editors — care can be a challenge. A useful journalistic technique is to tell individual workers' stories to make policy issues — e.g., OSHA reform — more relevant to the general reader. Compelling print or broadcast stories that focus on victims of workplace accidents can attract a far wider and potentially more influential audience than a white paper or journal article. Investigative reports on oil refineries, asbestos and vinyl chloride will be cited as examples.

CR 308

Hazardous Materials Shipping and Transportation

10:30 a.m.–11:30 a.m. + OCC, B110

Presenter: R. Knight, AMEC, Portland, OR. **Moderator:** V. Holden, CH2M HILL Plateau Remediation Company, Richland, WA.

The forgotten agency ... DOT. This presentation will discuss who is covered by the DOT regulations and how to meet the regulatory requirements. Awareness training — how the DOT system works. Function specific training — your specific ways to handle and store hazardous materials. Safety training-how to use the 2008 DOT Emergency Response Guidebook. Security awareness training — how to keep the bad guys away from your hazardous materials.

CR 309

Safety Culture: Motivation and Influence

10:30 a.m.–11:30 a.m. + OCC, D138

Presenter: M. Levitsky, O. Malik, ECOH Management Inc., Mississauga, ON, Canada. **Moderator:** S. Weeks, Hargrove Engineers + Constructors, Mobile, AL.

This session will explore how health and safety professionals can influence safety culture, probing in greater depth a topic introduced in a highly rated crossover presentation at AIHce 2010. 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.

PO 111

Field Detection, Sampling and Analysis: Real Time Detection Systems

10:30 a.m.–12:30 p.m. + OCC, A106

Arranger: W. Groves, Penn State, University Park, PA. **Moderator:** P. Smith, Uniform Services University, Bethesda, MD.

Monitors: M. Roe, 3M Company, Blaine, MN; L. Monteith, University of Washington, Seattle, WA.

10:30 a.m.

Fast GC Analysis with PID and FUV Detectors for Industrial Hygiene Monitoring at Low ppb Levels. (PO 111-1) J. Driscoll, D. Walsh, PID Analyzers, LLC, Pembroke, MA; P. Smith, Uniform Services University, Bethesda, MD.

10:50 a.m.

Improved Exposure Assessment with Person-Portable Gas Chromatography-Mass Spectrometry. (PO 111-2) P. Smith, OSHA, Salt Lake City, UT.

11:10 a.m.

Evaluation of a Direct-Sampling Instrument for Detecting Benzene in a Mixed-Hydrocarbon Environment. (PO 111-3) M. Plisko, J. Spencer, Environmental Profiles, Inc., Columbia, MD.

11:30 a.m.

Laboratory Comparison of Photo-Ionization Detector (PID) and Sorbent Tube Sampling for Measuring m-Xylene and n-Hexane. (PO 111-4) W. Groves, B. Marpoe, Penn State University, University Park, PA; E. Lee, M. Harper, J. Slaven, NIOSH, Morgantown, WV.

11:50 a.m.

Effect of Environmental Condition on Performance of Two Direct-Reading Organic Vapor Monitors. (PO 111-5) R. Lebouf, C. Coffey, T. Pearce, NIOSH, Morgantown, WV.

12:10 p.m.

Indirect Monitoring of Hexavalent Chromium Concentrations During Stainless Steel Welding Operations Using a Grimm 1.109, a TSI 8520 DustTrak, and a Haz-Dust EPAM 5000. (PO 111-6) L. Pahler, R. Larson, The University of Utah, Salt Lake City, UT.

PO 112

Healthcare Industries I: Exposure Assessment and Control

10:30 a.m.–12:30 p.m. + OCC, F149

Arranger: M. Jones, Department of Veterans Affairs, Iowa City, IA. **Moderator:** S. Derman, Medishare Environmental Health & Safety Services, Santa Clara, CA. **Monitors:** M. Jones, Department of Veterans Affairs, Iowa City, IA; N. Rice, Intermountain Healthcare, Salt Lake City, UT.

10:30 a.m.

Evaluation and Control of Dust from Lead Shielding in a Health Care Facility. (PO 112-1) J. Nesbitt, D. Krageschmidt, G. Sturchio, Mayo Clinic, Rochester, MN.

10:50 a.m.

Evaluation of Staff X-Ray Exposure and Protection Requirements in Operating Rooms. (PO 112-2) R. Ciconte, Fraser Health, Burnaby, BC, Canada; A. Yu, Fraser Health, New Westminster, BC, Canada.

11:10 a.m.

Evaluating Exposures to Waste Anesthetic Gases during Head and Neck Surgeries. (PO 112-3) L. Swenson, Veritox, Portland, OR; M. Krause, Veritox, Redmond, WA.

11:30 a.m.

Helicopter Exhaust Entrainment in a Hospital Laboratory: Assessment of Adverse Air Quality Outcomes after the Application of Controls. (PO 112-4) P. Chua, Fraser Health, Burnaby, BC, Canada.

11:50 a.m.

Hazardous Specimens in Medical Archive Collections. (PO 112-5) D. Krageschmidt, J. Nesbitt, K. Van Hoven, Mayo Clinic, Rochester, MN.

12:10 p.m.

Exposure Assessment, Occupational Illness and Workers' Compensation: Lessons Learned by a Clinical Industrial Hygienist. (PO 112-6) N. Beaudet, University of Washington, Seattle, WA.

PO 113

Risk Management Planning and Prevention

10:30 a.m.–12:30 p.m. + OCC, D136

Arrangers: P. Williams, E Risk Sciences, LLP, Boulder, CO; A. Rossner, Clarkson University, Potsdam, NY. **Moderator:** B. Heckman, LaCroix Pryor Davis LLC, Lafayette, CA. **Monitors:** S. Magasis, B. Bauer The Boeing Company, Seattle, WA.

10:30 a.m.

Analysis of the Risk Assessment Process Utilized by Select Government Agencies. (PO 113-1) K. Grissom, J. Spencer, Environmental Profiles, Inc., Columbia, MD.

10:50 a.m.

EPA's Chemical Action Plans: An Overview. (PO 113-2) A. Lamba, US EPA, Washington, DC.

11:10 a.m.

What's Normal: Considering Background When Assessing Risk. (PO 113-3) D. Walsh, Walsh Certified Consultants, Inc., Las Vegas, NV.

11:30 a.m.

Management of Occupational Risks at Single or Multiple Locations. (PO 113-4) V. Hillman, Liberty Mutual Group, Hopkinton, MA; P. Zybert, Raytheon Company, Waltham, MA.

11:50 a.m.

The NORSOK S-002 Working Environment Standard — A Proven Concept of Prevention through Design from the Norwegian Oil and Gas industry. (PO 113-5) H. Smedbold, Occupational Hygiene Solutions AS, Stavanger, Norway.

12:10 p.m.

Guidance on Handling and Disposal of Chemically Dosed Research Animal Waste. (PO 113-6) M. McCullough, Dana-Farber Cancer Institute, Boston, MA.

RT 215

Ask the Expert: An Update on the NIOSH Nanotechnology Research Program

10:30 a.m.–12:30 p.m. + OCC, Oregon 204

Arranger and Moderator: C. Geraci, NIOSH, Cincinnati, OH. **Monitors:** G. Dotson, NIOSH, Cincinnati, OH; B. Stockmeier, Argonne National Laboratory, Argonne, IL.

The National Institute for Occupational Safety and Health (NIOSH) is the federal agency in the U.S. responsible for conducting research and making recommendations to prevent work-related injury, illness, and death. NIOSH has collaborated with stakeholders at home and abroad to fill knowledge gaps related to nanotechnology, to identify and characterize hazards associated with nanomaterials, and to develop guidance for workers exposed to nanomaterials. Protecting the health of workers involved with nanotechnology is a global issue that requires international cooperation, commitment, and collaboration. To meet the challenge of responsible development of nanomaterial research, manufacture, and use, NIOSH established the Nanotechnology Research Center (NTRC) to coordinate and promote research in nanotechnology and to develop guidance on the safe handling of nanomaterials in the workplace. The NTRC is a virtual center in which NIOSH scientists and engineers at geographically dispersed locations are linked by shared computer networks and other technologies. The NTRC makes contributions to all the steps in the risk management continuum from hazard identification to risk management. Recent results from key areas of research being conducted by NIOSH will be presented in this roundtable.

- + **An Overview of Recent Results from NIOSH.** C. Geraci, NIOSH, Cincinnati, OH.
- + **Nanomaterials Toxicology—Key Results from Inhalation and in vitro Studies.** C. Geraci, NIOSH, Cincinnati, OH; V. Castranova, NIOSH, Morgantown, WV.
- + **Nanomaterials Exposure Assessments — Status of the NIOSH Carbon Nanotube Industrywide Study.** M. Dahm, NIOSH, Cincinnati, OH.
- + **Risk Assessment Approaches for Nanomaterials.** E. Kuempel, NIOSH, Cincinnati, OH.
- + **Advances in Respiratory Protection and Personal Protective Equipment.** A. Rengasamy, NIOSH, Pittsburgh, PA.

RT 216

Federal Environmental Lead Programs Update

10:30 a.m.–12:30 p.m. + OCC, B113

Arranger: W. Friedman, US Department Housing and Urban Development, Washington, DC. **Moderator:** K. White, Consultive Services, Virginia Beach, VA. **Monitors:** E. Pinzer, US Department Housing and Urban Development, Washington, DC; D. Levitt, US DOL, Washington, DC.

Key federal agencies involved in the federal strategy to eliminate childhood lead poisoning as a major public health problem will present on the progress made and describe their upcoming activities to protect workers, the public — especially children — and the environment. EPA will discuss the implementation strategy for its Repair, Renovation and Painting Rule, the expanded National Lead Laboratory Accreditation Program requirements, and its lead outreach and lead certification programs. The Army will discuss lead issues addressed and guidance issued and being developed by Department of Defense components, such as on lead in synthetic turf fields and at firing ranges, and on overseas soldiers' exposures. CDC will present results of its primary and secondary lead prevention and surveillance program, and its promotion of migration of lead-focused state and local programs to healthy homes programs. HUD will describe its new lead guidelines, its lead outreach and research efforts, and results from the recently published American Healthy Homes Survey, and its efforts to help local programs make a transition from lead to healthy homes. The agencies will cover regulatory issues; programmatic advances; educational materials and efforts; and highlight the roles, opportunities and challenges for public and private sector organizations and the public.

- + **CDC Lead Program Update.** B. Brooks, CDC, Atlanta, GA.
- + **DOD Components Lead Update.** V. Belfit, U.S. Army, Aberdeen Proving Ground, MD.
- + **HUD Lead Program Update.** W. Friedman, U.S. Department Housing and Urban Development, Washington, DC.
- + **EPA Lead Program Update.** J. Mosby, U.S. EPA, Washington, DC.

+ Technical Program: Tuesday

RT 217

Integrating Safety and Health into Green Construction: From Concept to Case Study

10:30 a.m.–12:30 p.m. + OCC, F152

Arranger: M. Gillen, NIOSH, Washington, DC. **Moderator:** B. Epstien, Epstien Environmental Resources, LLC, Marietta, GA. **Monitors:** J. Platner, CPWR - Center for Construction Research and Training, Silver Spring, MD; E. Stewart, Kaiser Permanente, Oakland, CA.

Green construction and the use of environmental rating systems such as the US Green Building Council LEED (Leadership in Energy and Environmental Design) continue to grow. It is clear that taking steps to reduce building energy and environmental impacts is important. However, the relationship between green construction practices and occupational safety and health is less clear. Do green practices offer benefits for safety and health? Do they introduce hazards? What steps do we need to be taking to better integrate safety and health into green practices to make sustainability a more comprehensive concept? What can we learn from green rating systems to encourage safety and health best practice? What insights can industrial hygienists working on green construction sites share about integrating safety and health? Roundtable speakers will address these questions, share perspectives on working with contractors, and describe an occupational safety and health rating system designed to complement LEED.

- + **NIOSH Construction Program Initiatives to Integrate Worker Health and Safety into Green Construction.** M. Gillen, NIOSH, Washington, DC.
- + **Integrating Safety and Sustainability: Recent Research and Applicability in Practice.** J. Gambatese, Oregon State University, Corvallis, OR.
- + **Tales from the Trenches, I Mean Bioswales: Construction Worker and Contractor Experiences with Green Systems and Safety and Health.** S. Hecker, University of Washington, Seattle, WA.
- + **Green AND Safe at NASA's Johnson Space Center.** S. Keptra, NASA, Houston, TX.

RT 218

Managing Radiation Surprises and a Memorial Tribute to Dr. Herman Cember

10:30 a.m.–12:30 p.m. + OCC, B116

Arranger: R. Johnson, Dade Moeller & Associates, Inc., Gaithersburg, MD. **Moderator:** M. Finnermore, Baxter Healthcare Corporation, Deerfield, IL. **Monitors:** S. Bump, Dade Moeller & Associates, Inc., Richland, WA; K. Hacker, BP America, Houston, TX.

The role of a radiation safety officer is normally routine implementation of a radiation safety program. However, every program should have plans for emergencies or surprises. When a surprise incident occurs will you be prepared? Typical incidents could include a spill of radioactive material; a lost source; a damaged sealed source or X-ray machine; potential radiation exposures; damage from a fire, flood, or winds; or a violation of regulations or safety program requirements. A panel of career specialists with substantial radiation emergency response experience will address how to manage radiation surprises. The panel of CHPs and CIHs brings over 100 years' of experience in radiation safety program management and response to radiation surprises. 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. This roundtable will also include a special memorial lecture in tribute to Dr. Herman Cember for his 60-year career in teaching industrial hygienists and others for better understanding of radiation.

- + **A Memorial Tribute to Dr. Herman Cember — Helping People Understand Radiation by Dispelling Radiation Myths.** R. Johnson, Dade Moeller & Associates, Inc., Gaithersburg, MD.
- + **Emergency Planning for Managing Radiation Surprises.** S. Merwin, Dade Moeller & Associates, Inc., Richland, WA.
- + **"Hello, We have an Emergency!"** R. Gallagher, Applied Health Physics, Inc., Dagsboro, DE.
- + **Radiation Surprises Are Preventable.** B. Thomas, Integrated Environmental Management, Findlay, OH.

RT 219

Today's Global Chemical Regulatory Shifts: Are We Leading or Following?

10:30 a.m.–12:30 p.m. + OCC, Oregon 201

Arranger: C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA. **Moderator:** M. O'Reilly, ARLS Consultants, Inc., Manlius, NY. **Monitors:** S. Dotson, NIOSH, Cincinnati, OH; R. Jones, ENVIRON International Corporation, Chicago, IL.

The global regulatory EH&S shifts experienced over the past two years have had significant impact on business models; basic science research; technology development; risk evaluation, mitigation and communication; product stewardship; environmental, health and safety processes; and, ultimately, lifestyle choices. While the global EH&S community's "view" is generally aligned directionally on the need for a greener and more sustainable future, the approaches and deliverables vary markedly. The first half of the roundtable presents historical background on the beginnings of risk assessment and management and their translation in the global regulatory community, as well as a synopsis of key regulatory changes, drivers and impacts that have characterized major shifts during the past five years. The second half of the roundtable will employ a presidential debate format in which nationally acclaimed leaders share their sometimes divergent views and respond to specific inquiries. Audience engagement will encourage a robust discussion of the approaches, needs, companion regulations, drivers and impact associated with these changes. This roundtable is a must for all EH&S professionals seeking to understand the major regulatory and legislative changes globally and potential impacts on business, EH&S and overall risk decision making.

- + **Highlights: A Look Back — Setting the Historical EH&S Regulatory Stage.** M. Jayjock, The LifeLine Group and LINEA, Inc., Langhorne, PA.
- + **Highlights: Today's Global EH&S Regulatory Paradigm Shifts.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.
- + **Open Forum — Exploration of the Key Issues and Need for Major Regulatory Reform vs. A More Tempered Approach.** M. Wilson, Berkeley Center for Green Chemistry, Berkeley, CA; S. Brozana, American Chemistry Council, Washington, DC.
- + **Closing Remarks.** F. Boelter, ENVIRON International Corporation, Chicago, IL.

Please!

Return session evaluations; bins are centrally located near meeting rooms.

PO 114

Personal Protective Clothing and Equipment

10:30 a.m.–12:50 p.m. + OCC, Oregon 203

Arranger: N. El-Ayouby, NIOSH, Pittsburgh, PA. **Moderator:** J. Szalajda, NIOSH, Pittsburgh, PA. **Monitors:** P. Gao, J. Szalajda, NIOSH, Pittsburgh, PA.

10:30 a.m.

Triethanolamine Permeation through a Disposable Nitrile Glove. (PO 114-1)
A. Mathews, S. Que Hee, University of California, Los Angeles, Los Angeles, CA.

10:50 a.m.

Permeation of Ethylene Glycol through Disposable Nitrile Gloves. (PO 114-2)
J. Zavala, S. Que Hee, University of California Los Angeles, Los Angeles, CA.

11:10 a.m.

Aerosol Penetration through Particulate Protective Clothing Materials. (PO 114-3)
W. Lin, S. Huang, Y. Huang, C. Chen, National Taiwan University, Taipei, Taiwan; Y. Kuo, Chung Hwa, University of Medical Technology, Tainan, Taiwan.

11:30 a.m.

Quantitative Analysis of Uniquely Distributed Submicron Paramagnetic Fe₃O₄ Particles Using Computer Controlled Scanning Electron Microscopy. (PO 114-4) P. Gao, NIOSH, Pittsburgh, PA; P. Jaques, URS Corporation, Pittsburgh, PA; P. Hopke, Clarkson University, Potsdam, NY.

11:50 a.m.

Integrity of Disposable Nitrile Exam Gloves Exposed to Simulated Movement. (PO 114-5) R. Phalen, California State University San Bernardino, San Bernardino, CA; W. Wong, University of California, Los Angeles, Los Angeles, CA.

12:10 p.m.

A Web Computer Tool for the Selection of Glove Material against Chemicals Based on the “Hansen Solubility Parameters” Theory. (PO 114-6) D. Drolet, J. Lara, IRSST, Montreal, QC, Canada; G. Perron, Consultant, Boucherville, QC, Canada; F. Zimmermann, A. Chollot, INRS, Vandoeuvre-lès-Nancy, France; C. Hansen, Consultant, Hoersholm, Denmark; R. Bourbonnais, Consultant, Laval, QC, Canada.

12:30 p.m.

How Clean Is “Clean”? Regulations and Standards for Workplace Clothing and Personal Protective Equipment. (PO 114-7)
G. Sirianni, Jonathan Borak & Co., New Haven, CT.

PO 115

Computer Applications

10:30 a.m.–12:50 p.m. + OCC, C121

Arranger: T. Carraway, U.S. Department of State, Washington, DC. **Moderator:** M. Groh. **Monitors:** M. Bergner, St. Paul, MN; G. Hutcheson, John Deere, Waterloo, IA.

10:30 a.m.

IH and Occupational Health Professionals Communicating? (PO 115-1)
K. Wisniewski, S. Parker-Monk, P. Steven, U.S. Army, Gunpower, MD.

10:50 a.m.

Safety Toolkit — Occupational Health and Safety Management Systems Tools. (PO 115-2) A. Ornstein, LMI, San Antonio, TX; J. Yasalonis, LMI, Aberdeen, MD; M. Kephart, LMI, Portland, OR.

11:10 a.m.

Using Database Software to Manage IH Exposure Data. (PO 115-3) K. Jaggassar, C. Briggs, ENVIRON International Corporation, Boston, MA; P. Webb, National Grid, Waltham, MA.

11:30 a.m.

Implementing a Global Database for Exposure Monitoring and Risk Assessment in Shell Oil Company. (PO 115-4)
P. Owens, Shell Oil Company, Martinez, CA.

11:50 a.m.

Utilizing Web-Based Tools for an Effective Risk Management Program. (PO 115-5)
C. Shaw, Succeed Management Solutions, LLC, Wilsonville, OR.

12:10 p.m.

Development of a Sample Size Calculator Using Land’s Exact Procedure to Assess Occupational Exposures. (PO 115-6)
P. Gao, NIOSH, Pittsburgh, PA.

12:30 p.m.

Preparing Your Organization for GHS Compliance. (PO 115-7) J. Braselman, Safetec, York, PA.

RT 220

Perspectives on Preparation for the CIH Exam — Version 5.0

10:30 a.m.–1:00 p.m. + OCC, D139

Arranger: C. Ficklen, SQA2, Inc., Hampton, VA. **Moderator:** A. Fleeger, ExxonMobil Company, Houston, TX. **Monitors:** B. VanDevender, SQA2, Inc., Hampton, VA; A. Lori, 3M Company, St. Paul, MN.

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.

+ Triathlon Training and the CIH Exam?

C. Hovde, Caterpillar, Roseville, MN.

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

+ Hitting a Homerun — Second at Bat.

M. Watson, Federal Railroad Administration, Washington, DC.

+ Putting the Elements Together to Pass the Exam. C. Ficklen, SQA2, Inc., Hampton, VA.

The Exposome: The Future of Exposure Science?

11:00 a.m.–Noon + OCC, C126

Presenters: M.D. Hoover, NIOSH, Morgantown, WV; M.A. Maier, TERA, Cincinnati, OH; D.G. DeBord, NIOSH, Cincinnati, OH.

Despite decades of research, the etiology of many occupational diseases remains largely unknown. Evidence indicates that the origins of certain chronic diseases have both genetic and environmental components. To better define the study of the environmental components, a new term, “Exposome,” is being used to refer to the totality of a person’s exposures. New methods and approaches for addressing the concept of “total cumulative exposure” are being used by many health agencies and impact current risk assessments for occupational and environmental scenarios. This panel presentation provides background on understanding and applying exposomics to assess and protect worker health. Case studies will be presented, as well as gaps in opportunities for collaboration to share data and to develop and implement improved protection strategies.

+ Technical Program: Tuesday

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 input from participants on opportunities for collaboration and impact. Luncheon discussion seating is first-come, first-served.

CR 310

OSHA Construction and General Industry Standards: Why You Need to Understand Both

11:30 a.m.–12:30 p.m. + OCC, B119

Presenter: D. Mazary, DuPont Sustainable Solutions, Virginia Beach, VA. **Moderator:** S. Weeks, Hargrove Engineers + Constructors, Mobile, AL. **Monitor:** A. Rodionova, University of California, Berkeley, CA.

Attendees will learn the answers to these important questions:

- + Do you know why your employees really need training in the OSHA Construction Standards even though you work in manufacturing?
- + Are there specific state regulations that mandate this OSHA Construction Standards training for some employers?
- + What are some of the significant differences when comparing the OSHA General Industry Standards with the Construction Standards?

Luncheon Discussions

NIOSH Table Talks

12:30 p.m.–1:30 p.m. + OCC, Expo, Hall D

1. Engineering Controls

Moderator: R.M. Hall, NIOSH, Cincinnati, OH.

NIOSH engineering control efforts include planning and conducting research on engineering control technologies to prevent worker exposures to hazards and promoting the use of effective engineering control technologies that protect workers. NIOSH researchers evaluate workplaces and develop practical, solutions-oriented control technology interventions. NIOSH scientists and engineers work collaboratively with companies, unions, trade associations, labor organizations, universities, and governments, in the U.S. and around the world. Discuss areas of engineering control research within NIOSH.

2. Hispanic Outreach

Moderator: D. Ceballos, NIOSH, Cincinnati, OH.

The NIOSH Health Hazard Evaluation Program (HHE) conducts workplace evaluations to learn whether workers are exposed to hazardous materials or harmful conditions, and a report is prepared to document findings and recommend hazard corrections. Participants will discuss the need for promoting Hispanic participation in this program and have the opportunity to discuss how to increase requests from Hispanic employees and employers. Participants will also discuss potential collaboration with other institutions and dissemination of materials to support Hispanic outreach efforts.

3. Improving NIOSH Identification of New and Emerging Hazards

Moderator: A. Sussell, NIOSH, Cincinnati, OH.

NIOSH occupational surveillance programs help identify emerging hazards through case reports received in health hazard evaluations (e.g., flavorings, SARS, and silica in roofing) and programs to assess fatalities as well as hazards of nanomaterials and fire fighting. However, gaps remain. How could NIOSH improve identification and prioritization of emerging hazards? How do practitioners identify new hazards? What information do practitioners need on emerging hazards? How could NIOSH best share this information?

4. Services Sector Exposure Risks

Moderator: D. Utterback, NIOSH, Cincinnati, OH.

The NORA Services Sector includes over 65 million workers across 11 NAICS industry sectors. Many jobs and tasks in services industries place workers at risk for exposures to chemical, physical and biological agents, in addition to ergonomic hazards. NORA goals list several services industry sectors where greater exposure information is needed: automotive repair, building services, education, hotels, public administration, recreation and solid waste. Participants will discuss significant hazards in these industries and identify sources of information on exposure potentials. A matrix of job titles by industry classes will help define opportunities for further investigations.

5. Nanotechnology

Moderators: C. Geraci, Laura 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 NIOSH's scientific expertise 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.

6. Heat Stress and Hot Environments

Moderator: B. Jacklitsch, NIOSH, Cincinnati, OH.

NIOSH is evaluating the scientific data on heat stress and hot environments and is updating the Hot Environments Criteria Document. A draft document for comment is expected in the latter half of 2011. NIOSH is particularly interested in comments on the following areas: (1) workplaces that are considered hot environments; (2) control measures; (3) possible long-term, cognitive, or reproductive health effects in workers; (4) effects of climate change; (5) impact on productivity and number of accidents; (6) susceptible sub-groups; and (7) heat tolerance and shift work.

7. Diacetyl and Diacetyl Substitutes

Moderator: L. McKernan, NIOSH, Cincinnati, OH.

Occupational exposures to diacetyl have been associated with flavorings-related lung disease, including bronchiolitis obliterans. In response, companies have begun to use substitutes, such as 2,3-pentanedione, to reduce diacetyl exposure. Published abstract reports on the toxicity of 2,3-pentanedione suggest that, in rats, 2,3-pentanedione causes airway epithelial damage similar to diacetyl. NIOSH is releasing a criteria document including a recommended exposure limit (REL) for both diacetyl and 2,3-pentanedione. This discussion will focus on the NIOSH REL process and updates on health effects, analytical chemistry, and exposure assessment methodologies.

8. NIOSH Publications and Products: What Can We Create to Meet your Occupational Safety and Health Needs?

Moderator: D. Van Bogaert, NIOSH, Cincinnati, OH.

Development of new channels of electronic communication and the needs of a new generation of workers indicate that NIOSH needs to change its methods of providing information. NIOSH is evaluating new channels of electronic communication for occupational safety and health information to meet these changes. NIOSH will share what it learned about workplace information wants and needs from their most recent Customer Service Survey. Participants are invited to contribute their thoughts about ideas for new information product development, gaps in current NIOSH information and products, and new methods of dissemination.

9. NIOSH Manual of Analytical Methods

Moderator: K. Ashley, NIOSH, Cincinnati, OH.

The *NIOSH Manual of Analytical Methods (NMAM)* is a collection of methods for sampling and analysis of contaminants in workplace air (or surfaces) and in the blood and urine of workers who are occupationally exposed. These methods were developed or adapted by NIOSH or its partners and were evaluated according to established experimental protocols and performance criteria. *NMAM* also includes chapters on quality assurance, sampling, portable instrumentation, etc. Often, NIOSH methods are developed in coordination with voluntary consensus standards organizations (ASTM International and ISO). Participants will discuss *NMAM* methods under development and needs for new methods and updates.

10. Understanding and Exploring the Exposome

Moderators: M.D. Hoover, NIOSH, Morgantown, WV; A. Maier, TERA, Cincinnati, OH; D.G. DeBord, NIOSH, Cincinnati, OH.

Discussion will focus on obtaining input from participants on the role of exposomics in the exposure sciences and on opportunities for collaboration and impact for protection of worker health.

William P. Yant Award Lecture

Can We Show that Exposure is Really Below the Limit? Some Developments in Sampling Strategy

12:30 p.m.–1:30 p.m. + OCC, Oregon 202



Lecturer: Trevor Ogden, British Occupational Hygiene Society and Co-chair, BOHS-NVVA Sampling Strategy Working Group, Derby, UK. **Co-author:** Jérôme Lavoué, Centre Hospitalier de

l'Université de Montréal, Canada.

ACGIH* is wise to emphasise that "TLVs are not fine lines between safe and dangerous conditions" and that they should be interpreted only by someone trained in industrial hygiene. Unfortunately, all over the world, regulators are not as wise and regard exposure limits exactly as if they were "fine lines" not to be exceeded. With exposure varying in a quasi log-normal fashion, it is difficult for a hygienist to plan a sampling program of reasonable size that reliably predicts the probability of compliance. The AIHA Manual* is probably the hygienist's best guide to managing exposure. Can we also devise a sampling strategy that will convince regulators that an exposure limit will not be exceeded?

Various authorities have given guidance on this over the years, and the guidance has changed to reflect research and experience. The British and Dutch occupational hygiene societies set up a joint working party in 2007 to produce guidance for their members. A draft was published for public comment in late 2009, which amongst other things tried to formally build individual variability into a strategy. Many comments were received from all over the world, and these included computer simulations of the strategy, which showed that the combination of approaches in the draft was seriously flawed. Also, during the consultation period, a French regulation brought a radical new strategy into force which drew on computer simulations. The draft guidance has now been revised to accommodate these developments and to try to build assessment of individual variability more satisfactorily into an overall strategy.

**A Strategy for Assessing and Managing Occupational Exposures*, 3rd Ed., Bullock and Ignacio, Eds., 2006. AIHA Press, Fairfax, VA 22031.

Exhibitor Product Demos and Presentations

1:00 p.m.–2:00 p.m. + Expo Theater, Hall D

1:00 p.m.

New Product Introduction — FS60 LiftPod® by JLG, JLG Industries, Inc.

JLG is pleased to announce the availability of the new LiftPod® FS60. We are continuing to focus on the wants and needs of our end-users, and the LiftPod FS60 delivers a 12 ft. height access solution to address the applications for the safety and facility managers in the health care, education and office building markets. Improve your productivity with the LiftPod® by JLG. The FS60 has a 30" wide base that rolls through standard width doorways, making moving from location to location a breeze. Nonmarking reuse caster wheels optimize mobility in tight spaces, while a compact mast provides clearance in lower ceiling environments. Be more productive while meeting OSHA safety standards. Visit www.liftpod.com for additional information.

1:30 p.m.

Revolutionary Wireless Solution for Whole-body and Hand-arm Vibration Exposure Assessment per ACGIH® TLV Guidelines and ANSI S2.70-2006, Casella CEL Inc.

Whole-body and hand-arm vibration causes compensable injuries, but exposure assessments and meaningful exposure data are perceived by many Industrial Hygienists as difficult to obtain. The ACGIH TLVs for exposure require multiple axis measurements using 1/3 octave frequency plus the broadband ISO and ANSI weightings, but until now, there was no convenient and reliable way to obtain these data. The introduction of a miniature wireless vibration analyzer for continuous exposure monitoring makes this possible today.

Workshop

Sold Out

Unsolved IH Mysteries Workshop

12:30 p.m.–2:00 p.m. + OCC, D133

Facilitator: Fred Boelter, CIH, PE, BCEE, Environ International, Chicago, IL

+ Technical Program: Tuesday

CR 311

Culture and Exposure Control

2:00 p.m.–3:00 p.m. + OCC, D139

Presenter: D. Groover, BST, Ojai, CA.

There is a growing body of evidence regarding the relationship between the behavior of employees with regard to compliance to safety and health rules and policy and attributes of culture. Seemingly unrelated attributes like fairness and transparency in decision making can have a direct and predictive effect on compliance. This talk will summarize these studies and explore the correlation and outline the implications of moving from a culture of compliance to a culture of commitment.

CR 312

Lessons Learned from Teaching Lead RRP, and an Update on EPA's Rule

2:00 p.m.–3:00 p.m. + OCC, D138

Presenter: G. Baker, AMEC Earth & Environmental, Inc., Portland, OR.

Moderator: P. Stanch, NASA, Houston, TX.

Monitor: K. Hauck, University of Iowa, Iowa City, IA.

This presentation provides an overview of EPA's Lead Renovation, Repair and Painting (RRP) rule. Recent rule changes will be highlighted along with lessons learned from having taught thousands of contractor employees. Lead RRP does not emphasize OSHA regulations related to renovation, and this is causing problems, specifically for contractors, subcontractors, tenants, and the public. The presenter/trainer will share data from his pre-class questionnaire that suggests that most small renovation contractors are chronically out of compliance with several OSHA rules.

RT 221

Addressing the Hazards of New and Emerging Issues within the Workplace

2:00 p.m.–4:30 p.m. + OCC, Oregon 202

Arranger and Moderator: G. Dotson,

NIOSH, Cincinnati, OH. Monitors:

B. Beadie, PCA Health and Safety Consultants, Lake Oswego, OR; A. Rossner, Clarkson University, Potsdam, NY.

Limited or no data are often available to assist in evaluating the health risks associated with

occupational exposure to new or emerging issues. In the absence of such data, how can the health risks of these new and emerging hazards be effectively evaluated? This roundtable is intended to address the challenges associated with addressing the hazards of new and emerging issues within the workplace. Specific topics that will be covered include (1) Understanding the relationship between exposure assessments and human health risk assessments; (2) Application of the National Academy of Sciences (NAS) risk assessment paradigm to evaluate new and emerging issues; and (3) Using a structured framework to classify emerging exposures and interpret exposure data for use in risk assessments. Case studies will be presented to illustrate both broad concepts and specific examples encountered during the evaluation of new and emerging issues, including (1) Risk management approaches associated with new or emerging technologies, including engineered nanomaterials; (2) Industry's perspective to managing the risks of hazards in the workplace; and (3) Identification and measurement of diacetyl substitutes.

+ **Understanding the E and Risk.** M. Jayjock, LINEA, Inc., Langhorne, PA.

+ **Risk Assessment Methodologies for New and Emerging Issues.** F. Boelter, ENVIRON International Corporation, Chicago, IL.

+ **Exposure Assessment Methodologies for New and Emerging Issues.** S. Woskie, University of Massachusetts, Lowell, MA.

+ **Emerging Technologies: Risk Management When Risk Assessment Information Is Limited.** L. Gibbs, Stanford University, Stanford, CA.

+ **Industry's Perspective: Integrated Approach to Managing Both Emerging and Established Exposure Risks.** J. Mulhausen, 3M Company, St. Paul, MN.

+ **Identification and Measurement of Diacetyl Substitutes in Dry Bakery Mix Production.** G. Day, NIOSH, Morgantown, WV.

RT 222

Fit-Testing Hearing Protection Devices: Technology, Application, and Implementation

2:00 p.m.–4:30 p.m. + OCC, B113

Arranger: C. Johnson, University of

Minnesota, St. Paul, MN. Moderator:

J. Ratliff, Kanto Corporation, Portland, OR.

Monitors: S. Culbert, 3M Company, St. Paul, MN; J. Tredinnick, University of Minnesota, St. Paul, MN.

With the advent of field attenuation measurement systems for hearing protectors, occupational health professionals are now being asked to organize fit-testing programs. There are many challenges associated with implementing a successful fit-testing program. The panelists in this roundtable will offer important perspectives on the currently available technologies, provide information about current standards for fit-testing devices, and provide helpful insight for the practicing hygienist about implementing a successful testing program. Panelists will discuss research relating to hearing protection usage, fit, performance, and efficacy.

+ **An Introduction to Fit-Testing of Hearing Protection Devices: Rationale, Technologies, and Applications.** L. Hager, 3M Company, Portland, MI.

+ **Update on ANSI Draft S12.71 — Performance Criteria and the Reporting of Uncertainty for Hearing Protection Device Field Attenuation Measurement Systems.**

E. Berger, 3M Company, Indianapolis, IN.

+ **Practical Considerations for Implementing a Hearing Protection Fit-Testing Program.** C. Johnson, University of Minnesota, and Pace Analytical Services, St. Paul, MN.

+ **Fit-Testing in the Real World.** T. Schulz, Sperian Hearing Protection, Fredericktown, PA.

+ **Point Measurement and Continuous Monitoring of Hearing Protector Performance at an Aluminum Smelter.** K. Michael, Michael & Associates, Inc., Furnace, PA.

RT 223

Healthcare Construction: Moving Forward

2:00 p.m.–4:30 p.m. + OCC, B119

Arranger and Moderator: B. Geer, Mission Support Alliance, Snohomish, WA.

Monitors: M. Krause, Veritox, Redmond, WA. M. Rose, Rose Environmental, Seattle, WA.

In all health care facilities, the delivery of quality health care and construction activity is in constant conflict. Both are vitally important to patients, staff, and organization but are seemingly incompatible with one another. Industrial hygienists and the application of industrial hygiene principles have played a significant role in supporting patient safety, infection prevention, occupational health, and construction goals; however, construction projects continually increase in complexity, at-risk patient

populations expand, and novel and increasing challenges are presented by construction. New approaches to these challenges have been developed and include the formation of unique construction management and oversight teams to comprehensively integrate safety throughout all construction projects in an institution, apply industrial hygiene principles for infection prevention purposes during HVAC system duct relocation projects in an operating health care facility with at-risk patients, implement successful administrative management of construction noise where engineering controls failed, and apply LEED principles to health care facilities to achieve sustainability goals outside of strictly following LEED guidelines.

- + **Construction Renovation Safety Group: A Process for Successfully Managing Construction throughout a Health Care Organization.** D. Kay, Virginia Mason Medical Center, Seattle, WA.
- + **Playing the Hand You're Dealt — Applying IH Principles to Challenging Healthcare Construction Projects.** L. Lee, Pacific Industrial Hygiene LLC, Kirkland, WA.
- + **Finding the Balance between Pollyanna and Chicken Little When Communicating the Impact of Construction Noise.** J. Pierce, Virginia Mason Medical Center, Seattle, WA.
- + **The Future of LEED in Health Care.** D. Green, Kaiser Permanente, Hillsboro, OR.

RT 224

International Ergonomic Analysis Tools and Standards: Beyond Our Borders

2:00 p.m.–4:30 p.m. + OCC, F152

Arranger and Moderator: S. Gibson, Ergonomics Applications, Salem, SC.
Monitors: S. Gutmann, Thomson Reuters, Eagan, MN; G. Gruetzmacher, University of Wisconsin–Whitewater, Whitewater, WI.

Many countries other than the U.S. have developed and routinely utilize ergonomic analysis tools and standards. International standards address musculoskeletal risk, thermal conditions, vibration, and many other ergonomic issues. Some common analysis tools are checklists, while others are quantitative or semi-quantitative models that allow the user to evaluate work conditions and determine the relative risk of work-related musculoskeletal disorders. This roundtable will discuss the ergonomic standards and analysis tools frequently used in other countries and how they are used. They will

contrast these with those commonly used in the United States.

- + **Survey of European Ergonomic Analysis Tools and Standards.** S. Gibson, Ergonomics Applications, Salem, SC.
- + **A Canadian Perspective on Ergonomic Tools and Standards.** D. Robinson, Robinson Ergonomics, Coquitlam, BC, Canada.
- + **The EU and Vibration: Standards and Methods.** C. Shulenberger, Clayton Group Services, Ashland, OR.
- + **The Office Abroad: International Office Ergonomic Standards and Analysis Methods.** M. O'Reilly, ARLS Consultants, Inc., Manilus, NY.
- + **A Multinational Approach to Ergonomic Methods.** L. Nystrom, DuPont, Wilmington, DE.

RT 225

NFPA 70E — Understanding Requirements, Relationships and Responsibilities

2:00 p.m.–4:30 p.m. + OCC, A106

Arranger: S. Fess, Xerox Corporation, Webster, NY. **Moderator:** T. Martin, DTE Energy Resources, Ann Arbor, MI. **Monitors:** G. Crawford, Weston Solutions Inc., West Chester, PA; J. Ingram, EH&S Consultant, Alameda, CA.

NFPA 70E (the National Electrical Code – Appendix E) was written and has been implemented to provide the practicing electrical specialist (electrician, engineer, power distribution specialist, maintenance personnel, etc.) better protection from the potential hazard known as an arc flash or arc blast. These requirements also apply to prevent worker shock and electrocution during energized work. Anyone involved in electrical work over 50V AC is now required to follow the requirements of this standard. Workplace audits and project plan reviews have shown that basic knowledge and acceptance of compliance requirements is still unknown to many companies and individuals. While this currently is a voluntary consensus standard, enforcement by OSHA with major penalties does occur. This roundtable will examine aspects and examples of compliance activities from the perspective of the customer, contractor, and instructor. The presenters will provide ideas and recommendations to aid in improving electrical safety practices and compliance at your workplace.

- + **NFPA 70E Requirements for Host Employer / Contractor Relationships.** P. Zoubek, Zoubek Consulting, LLC, San Diego, CA.
- + **Contract Specifications and Compliance with NFPA 70E Calculations, Labeling, and Requirements.** S. Eversmeyer, Port of Portland, Portland, OR.
- + **A General Industry and Customer Perspective — From Training and Preparing Internal Personnel to Evaluating, Selecting, and Interacting with Outside Contractors.** S. Fess, Xerox Corporation, Webster, NY.
- + **Electrical Safe Work Practices: OSHA 1910.332–335 / NFPA 70E.** M. Murphy, Center to Protect Workers Rights, Junction City, OR.
- + **The Contractor's Perspective on the 70E Standard's Requirements and How to Assure Compliance and Examples of What Is Experienced and Seen at Customer Locations: The Old, the New and the Unexpected.** G. Fadden Sr., Christenson Electric, Inc., Portland, OR.

SS 002

Science Symposium: Emerging Exposure Assessment Methods for Occupational Epidemiology Studies

2:00 p.m.–4:30 p.m. + OCC, F149

Arranger and Moderator: S. Viet, Westat, Steamboat Springs, CO. **Monitors:** T. Armstrong, TWA8HR Occupational Hygiene Consulting, Branchburg, NJ; S. Maberti, ExxonMobil, Houston, TX.

- + **A Biologic Approach to Environmental Assessment and Epidemiology.** D. Kriebel, Department of Work Environment, University of Massachusetts Lowell, Lowell, MA.
- + **Use of the OSHA IMIS Database for Exposure Assessment in Occupational Epidemiology.** J. Lavoué, Centre de Recherche du CHUM, Montreal, QC, Canada.
- + **Use of Exposure and Exposure Determinants Data to Model Exposures for Occupational Epidemiology Studies.** M. Waters, NIOSH, Cincinnati, OH.
- + **The Challenges with Conducting Epidemiologic Studies using Deployed Military Cohorts and Mixed Exposures.** C. Rennix, Navy and Marine Corps Public Health Center, Williamsburg, VA.
- + **Incorporating Dermal Exposure into Retrospective Exposure Assessment.** J. Sahmel, ChemRisk, Boulder, CO.

+ Technical Program: Tuesday

PO 116

Respiratory Protection I

2:00 p.m.–5:00 p.m. + OCC, C121

Arranger and Moderator: J. Noble, Ascend Performance Materials, Gonzalez, FL.

Monitors: W. Bishop, DTE Energy, Detroit, MI; J. Parker, NIOSH, Pittsburgh, PA.

2:00 p.m.

Enhanced Respiratory Protection Offered by a Strapless Filtering Facepiece

Respirator. (PO 116-1) S. Grinshpun, T. Reponen, R. McKay, K. Cho, University of Cincinnati, Cincinnati, OH.

2:20 p.m.

Head and Face Shape Variations of U.S.

Civilian Workers. (PO 116-2) Z. Zhuang, NIOSH, Pittsburgh, PA; C. Shu, P. Xi, National Research Council of Canada, Institute for Information Technology, Ottawa, ON, Canada; M. Bergman, URS, Corp., Pittsburgh, PA.

2:40 p.m.

Total Inward Leakage — An Assessment of Variation in the Implementation of Anthropometric Marking and Measurement Techniques. (PO 116-3)

A. Quiring, Scott Health & Safety, Monroe, NC.

3:00 p.m.

Adsorption Characteristics of Activated Carbon Fibers for Toluene: Application on Respiratory Protection. (PO 116-4)

J. Balanay, C. Lungu, University of Alabama at Birmingham, Birmingham, AL.

3:20 p.m.

Advances in Mask Integrity Testing.

(PO 116-5) E. Hanson, M. Serach, Air Techniques International, Owings Mills, MD.

3:40 p.m.

Comparison of Pressure Drop and Filtration Efficiency of Particulate Respirators Using Welding Fume and NaCl. (PO 116-6)

C. Yoon, H. Zho, Seoul National University, Seoul, Republic of Korea; J. Lee, S. Lee, 3M Company, Suwon, Republic of Korea; A. Viner, E. Johnson, 3M Company, St. Paul, MN.

4:00 p.m.

Factors Affecting Filter Penetration and Quality Factor. (PO 116-7)

P. Chen, S. Huang, C. Chen, National Taiwan University, Taipei, Taiwan; C. Chen, Institute of Occupational Safety and Health, Taipei, Taiwan.

4:20 p.m.

Air-Purifying Cartridge Sensor Integration Approach for Active End of Service Life Indication. (PO 116-8)

M. Parham, Tyco/Scott Health & Safety, Monroe, NC.

4:40 p.m.

Evaluation of the NIOSH SCBA Positive Pressure Test and NFPA Airflow

Performance Test. (PO 116-9) J. Parker, J. Palcic, A. Reeder, NIOSH, Pittsburgh, PA.

RT 226

Green Chemistry: Opportunities for the Industrial Hygienist

2:00 p.m.–5:00 p.m. + OCC, Oregon 204

Arranger: M. Johnson, IHS, Englewood, CO.

Moderator: K. Trefethen, Kaiser Permanente, Oakland, CA. **Monitors:** L. Sedlak, BDHHI, Foothill Ranch, CA; C. DePasquale, Compass Environmental, Inc., Kennesaw, GA.

Industrial hygienists have a tremendous opportunity to further create a safer workplace environment through the use of green chemistry initiatives that promote substitutes or alternative technologies that have fewer negative impacts on human health and the environment. Organizations are increasingly tapping into industrial hygiene expertise to advance product stewardship, workplace safety and Green Chemistry. Formulators, assemblers and end users all play a role in advancing Green Chemistry. In this practical and informative session, you will (1) Gain understanding of the Green Chemistry landscape from the IH perspective, (2) Learn how to apply industrial hygiene skills to Green Chemistry (3) Hear from other industrial hygienists about real-world applications of Green Chemistry and expanding opportunities in this exciting area.

+ **Green Chemistry, Industrial Hygiene and Global Environmental Health Protection.**

M. Wilson, University of California, Berkeley, Berkeley, CA.

+ **Green Chemistry Transformative Regulatory and Policy Changes from the IH Perspective.**

C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.

+ **WITHDRAWN Green Chemistry as a Strategy for Industrial Hygiene.** L. Heine, Clean Production Action, Medford, MA.

+ **Expanding the IH Role through Green Chemistry.** B. Lyle, LifeScan Inc., Milpitas, CA.

+ **A Risk Assessment Approach to Procuring Safer Alternatives.** E. Stewart, Kaiser Permanente National EH&S, Oakland, CA.

+ **Red, Black and Green: How Green Cleaning Has Improved the Environment, Worker Safety and Bottom Line at the University of Georgia.** A. Lehocky, Board of Regents of the University System of Georgia, Atlanta, GA.

PO 117

Indoor Environmental Quality I

2:00 p.m.–5:20 p.m. + OCC, D136

Arranger: J. Hicks, Exponent, Inc., Oakland, CA.

Moderator: S. Hays, Gobbell Hayas Partners, Inc., Nashville, TN. **Monitors:** S. McCarthy, P. Rey, Exponent, Inc., Oakland, CA.

2:00 p.m.

A Post-Construction, Pre-Occupancy Indoor Environmental Quality (IEQ)

Baseline Survey for LEED Construction.

(PO 117-1) S. Ndiritu, Kennesaw State University, Kennesaw, GA.

2:20 p.m.

Air Quality Monitoring During the Construction and Commissioning of the

North Carolina Museum of Art.

(PO 117-2) R. Herrick, Herrick Engineering Inc., Cary, NC.

2:40 p.m.

Lessons Learned from the First Generation of Green Buildings. (PO 117-3)

V. Holden, CH2M HILL Plateau Remediation Company, Richland, WA.

3:00 p.m.

WITHDRAWN An Evaluation of Green Building Remodeling and Weatherization Programs for Content that Protects and Promotes Occupant Health. (PO 117-4)

M. Kawamura, Institute for the Built Environment, Windsor, CO.

3:20 p.m.

Characterization of Indoor-Outdoor Air Quality at a Coast Guard Facility Near the Houston Ship Channel. (PO 117-5)

T. Stock, L. Whitehead, L. Pompeii, D. Beasley, C. Maypole, University of Texas, Houston, TX.

3:40 p.m.

Recommended Practices for Sampling and Analysis of PCBs in Indoor Air. (PO 117-6)

W. Mills, Mills Consulting Inc., Oak Park, IL.

4:00 p.m.

Investigation and Resolution of Air Quality Complaints Associated with the

Breakdown of Carpet Materials in a New

School Building. (PO 117-7) C. Robbins, M. Krause, J. Thom, Veritox, Inc., Redmond, WA; L. Swenson, Veritox, Inc., Portland, OR.

4:20 p.m.

Validation, Expansion and Application of a Mass Transfer Model to Predict Diffusive Styrene Emissions from a Composite Building Material. (PO 117-8)

S. Crawford, C. Lungu, University of Alabama at Birmingham, Birmingham, AL.

4:40 p.m.

Inconsistencies of Indoor Air Quality Criteria in Guidance Documents for the Remediation of Indoor Marijuana Grow Operations. (PO 117-9) T. Lucas, InAIR Environmental Inc., Ottawa, ON, Canada.

5:00 p.m.

Water Treatment Rooms Have Been Neglected in Occupational Exposure Surveys in Indoor Swimming Pools. (PO 117-10) P. Kalliokoski, T. Rahkonen, University of Eastern Finland, Kuopio, Finland; T. Jauhiainen, P & T Jauhiainen Ltd, Helsinki, Finland; S. Rautiala, Finnish Institute of Occupational Health, Kuopio, Finland; T. Rantio, Finnish Institute of Occupational Health, Tampere, Finland.

PO 118

Industrial Hygiene General Practice

2:00 p.m.–6:00 p.m. + OCC, B110

Arranger and Moderator: D. Day, Sealed Air Corporation, Duncan, SC. **Monitor:** Y. Luiza, University of Central Missouri, Warrensburg, MO.

2:00 p.m.

Association between Environmental and Biological Concentrations of Petroleum Derived Hydrocarbons among Offshore Workers Exposed to Crude Oil. (PO 118-1) G. Talaska, P. Succop, The University of Cincinnati, Cincinnati, OH; N. Hopf, Institut Universitaire Romand de Santé au Travail, Lausanne, Switzerland; J. Kirkeleit, University of Bergen, Bergen, Norway.

2:20 p.m.

Health Hazard Profiles: IH for Non-IHs. (PO 118-2) J. Hinton, Baker Hughes, Houston, TX.

2:40 p.m.

Elevated Postshift Levels of 2-Naphthol in Rubber Workers Do Not Predict DNA Adduct Levels in Exfoliated Urothelial Cells. (PO 118-3) G. Talaska, The University of Cincinnati, Cincinnati, OH; B. Gaultney, PPG Industries, Natrium, WV; S. Peters, R. Vermeulen, Utrecht University, Utrecht, Netherlands.

3:00 p.m.

The Industrial Hygiene Path to VPP. (PO 118-4) W. Adams, R. Moon, Safex, Inc., Westerville, OH; T. Reeves, Nucor, Marion, OH.

3:20 p.m.

Industrial Hygiene Exposure Management at a DOE Gaseous Diffusion Plant. (PO 118-5) J. Romine, Energy Solutions, Cincinnati, OH.

3:40 p.m.

Industrial Hygiene Assessment of Foundry Work. (PO 118-6) L. Kneten, R. Rogers, U.S. Army, Aberdeen Proving Ground, MD.

4:00 p.m.

Evaluation of Health and Safety in Small Auto Collision Repair Shops. (PO 118-7) A. Bejan, D. Parker, M. Skan, Park Nicollet Institute, Minneapolis, MN; L. Brosseau, University of Minnesota, Minneapolis, MN.

4:20 p.m.

Evaluation of Asbestos in Dust on Surfaces by Side-by-Side Comparison of Micro-Vacuum and Wipe Sampling Methods. (PO 118-8) J. Kominsky, Environmental Quality Management, Inc., Cincinnati, OH; J. Millette, MVA, Inc., Duluth, GA.

4:40 p.m.

Total and Respirable Dust and Silica Exposures in the Simulated Lunar Operations (SLOPE) Facility. (PO 118-9) B. Hodgson, NASA, Cleveland, OH.

5:00 p.m.

Exposure Assessment of Airborne Total Dust and Asbestos Concentrations from Asbestos-Containing Interior Materials Removal in Korea. (PO 118-10) S. Byeon, J. Lee, H. Choi, H. Moon, Korea University, Seoul, Republic of Korea; K. Lee, Korea Institute of Science and Technology, Seoul, Republic of Korea.

5:20 p.m.

Fiber Escape from Asbestos Abatement Enclosures: Qualitative Results. (PO 118-11) P. Bozek, University of Toronto, Toronto, ON, Canada.

5:40 p.m.

In-Cab Employee Exposure Assessment during Street Sweeping Operations. (PO 118-12) J. Biddle, Northern Arizona University, Flagstaff, AZ.

RT 227

Integrated Solutions in Sustainable Occupational Health and Safety Management Systems

2:00 p.m.–6:00 p.m. + OCC, B116

Arranger: A. Korchevskiy, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO. **Moderator:** J. Howe, Safety Solutions, Inc., Medford, OR. **Monitors:** A. Haugh, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; R. Nelson Shea, Safety Compliance Services, LLC, Northville, MI.

Development and implementation of sustainable management solutions is one of the key factors for industry to improve occupational health and safety performance. For the OHS management system to be efficient, it is necessary to provide integration between different levels of management, including interactions with quality and environmental management systems, corporate culture and psycho-social atmosphere, as well as general structure and mechanisms of company governance. During the roundtable, the international management models and auditing specifications such as OHSAS 18001:2007, ANSI Z-10, and ISO 19011 will be discussed in the context of their incorporation into a wider environment. Pro and cons of the British PAS 99 integrated management specification and other generic management solutions will be compared. Special attention will be paid to the practical application of using ANSI/AIHA Z10, as well as the expected changes and improvement in this important national document. Recommendations are offered for interested parties on how to utilize management system integration with the aim of reducing of occupational health and safety risks, driving continuous improvement and preventing injury and illness.

+ **The Evolution of Integrated Management Systems and Why This Is Important to Understand.** C. Redinger, Redinger EHS, Inc., Harvard, MA.

+ **OHSA's 18001:2007 Management Systems: Integration into Corporate Environment.** A. Korchevskiy, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

+ **Auditing Integrated Management Systems — The Impact of ISO 19011.** T. Dunmire, ENLAR Compliance Services, Largo, FL.

+ **Behavioral Considerations in the Implementation of Occupational Health and Safety Management Systems.** D. Reinke, NIOSH, Pittsburgh, PA.

+ Technical Program: Tuesday

- + **Limitations and Challenges with Traditional Safety Approaches.** M. Taubitz, FDR Safety, Fenton, MI.
- + **Overview and Status of ANSI / AIHA Z10.** V. Toy, IBM, San Jose, CA.
- + **Performing a Virtual Gap Analysis in Your Organization.** K. Dotson, The Dotson Group, San Jose, CA.
- + **Nucor Steel Case Study.** T. Reeves, Nucor Corporation, Marion, OH.

RT 228

NIOSH Health Hazard Evaluations: Results of Recent Industrial Hygiene Evaluations

2:00 p.m.–6:00 p.m. + OCC, Oregon 203

Arranger: S. Brueck, NIOSH, Cincinnati, OH. **Moderator:** T. Seitz, NIOSH, Cincinnati, OH. **Monitors:** L. Chen, S. Durgam, 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. This 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.** G. Burr, NIOSH, Cincinnati, OH.
- + **Comparison of Mold Exposures, and Visual Contrast Sensitivity among School Teachers.** N. Burton, NIOSH, Cincinnati, OH.
- + **Evaluation of Cisplatin Exposures at an Oncology Clinic.** J. Couch, NIOSH, Cincinnati, OH.
- + **Carbon Monoxide Exposures in U.S. Forest Service Base Camp Support Personnel during Wildland Fires.** R. McCleery, NIOSH, Cincinnati, OH.

- + **Bioaerosol Sampling for 2009 Pandemic Influenza (H1N1) in Dental Offices.** S. Brueck, NIOSH, Cincinnati, OH.
- + **Evaluation of TB Exposures in an Elephant Care Facility.** R. Niemeier, NIOSH, Cincinnati, OH.
- + **Evaluation of Radio Frequency Exposures at Atomic Time Radio Stations.** K. Fent, NIOSH, Cincinnati, OH.
- + **HHEs ... the Rest of the Story.** S. Ahrenholz, NIOSH, Cincinnati, OH.

RT 229

OSHA's Response to the Deepwater Horizon Oil Spill

2:00 p.m.–6:00 p.m. + OCC, Oregon 201

Arranger and Moderator: C. Coe, OSHA, Atlanta, GA. **Monitors:** C. Coe, OSHA, Atlanta, GA; R. Fairfax, OSHA, Washington, DC.

This session will describe actions undertaken by OSHA in response to the Deepwater Horizon Oil Spill. The panel of speakers will address various aspects of the response from OSHA's role under the National Contingency Plan, training, outreach, hazard assessment, exposure monitoring and the outcomes of OSHA's efforts.

- + **Overview of the Deepwater Horizon Oil Spill Response Event.** C. Payne, OSHA, Jackson, MS.
- + **OSHA's Role in the Deepwater Horizon Oil Spill Response.** C. Jones, OSHA, Washington, DC.
- + **Site Safety and Health Plans for the Deepwater Horizon Oil Spill Response.** K. Petermeyer, OSHA, Mobile, AL.

- + **Hazard Assessment and Control during the Deepwater Horizon Oil Spill Response.** D. Bates, OSHA, Oklahoma City, OK.
- + **OSHA Exposure Assessment Onshore and Offshore in the Deepwater Horizon Oil Spill Response.** T. Jordan, OSHA, Salt Lake City, UT.
- + **Deepwater Horizon Response Worker Training Development, Assessment and Delivery.** D. Wingo, OSHA, Dallas, TX.
- + **OSHA Outreach and Communication Strategies during the Deepwater Horizon Oil Spill Response.** Y. Wheeler, OSHA, Dallas, TX.
- + **Results and Outcomes from OSHA's Efforts during the Deepwater Horizon Oil Spill Response.** T. Harrison, OSHA, Atlanta, GA.

CR 313

TSCA Regulatory Compliance: Challenges and Solutions

3:30 p.m.–4:30 p.m. + OCC, D139

Presenter: T. Webber, 3E Company, Carlsbad, CA. **Moderator:** D. Blurton, Consultant, Portland, OR. **Monitor:** Y. Zhen, University of Central Missouri, Warrensburg, MO.

Toxic Substances Control Act (TSCA) requirements are often not well understood. In this session, the speaker will provide an overview of TSCA requirements including applicable sections of TSCA pertaining specifically to or potentially impacting imported materials and products. The speaker will also provide an overview of recent legislation to reform TSCA and discuss the potential impact of the proposed changes.

Celebrate the 40th Anniversary of the OSH Act

Special recognition at the Wednesday General Session
OSHA and NIOSH staff requested to attend.



ENGINEERED UNBOUND NANO PARTICLES

MITIGATE RISK
ENSURE COMPLIANCE
PROTECT WORKERS

When working with unbound nanoparticles (UNP), RJ Lee Group can help *alleviate concern* about potential sources of exposure to workers and the environment. Our experts will conduct a customized study to assess the potential release of UNP and then determine appropriate control measures.

AIHce 2011
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LEARN MORE

"Evaluation of the Potential Release of Unbound Engineered Nanoparticles at Laboratory Research Facility."

RJ Lee Group Podium Session:
May 18, 6:20

 **RJ LEE GROUP**



+ At-a-Glance: Wednesday

Wednesday, May 18

7:00 a.m.-5:30 p.m.

Volunteer Collaboration Café
OCC, Lobby C

7:30 a.m.-3:00 p.m.

Press Room
OCC, D132

7:30 a.m.-4:00 p.m.

Registration and Hotel Reservations
OCC, Lobby A

7:30 a.m.-6:30 p.m.

Speaker Ready Room
OCC, C124

8:00 a.m.-9:00 a.m.



**General Session:
OSHA: Initiatives,
Challenges, Directions**
David Michaels, PhD, MPH,
Assistant Secretary of Labor,
OSHA, Washington, DC
OCC, Portland Ballroom

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

Poster Sessions
OCC, Hall B

Poster Session 405
(Graduate and Undergraduate Students)
Authors Present 10:00 a.m.-Noon

**WD 503 2nd International Symposium on
Wood Dust: Monitoring and Control**
OCC, A108

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

Visit the Expo!
OCC, Halls B-E

*Daily Prizes, Special Displays,
Cyber/Message 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.

**AIHA CareerAdvantage Development Fair
2011**
OCC, Hall A

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

Exhibitor Product Demos and Presentations
Expo Theater, Hall D

*See presentation descriptions on pages 68 and
72.*

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

TT-05 SolarWorld Industries of America
*OCC, Bus departs MLK entrance; board by
9:15 a.m.*

10:00 a.m.-11:00 a.m.

**CR 314 Construction Noise: Managing
Community Expectations**
OCC, B113

**CR 315 OSHA Local and National Emphasis
Program Inspections--How Companies Can
Get Prepared**
OCC, B110

10:00 a.m.-11:30 a.m.

Ask the Expert: Dr. David Michaels
OCC, B119

10:00 a.m.-Noon

PO 119 All Things Radiation
OCC, D136

**PO 120 Alternate Exposure Assessment
Strategies**
OCC, Oregon 202

**RT 230 A Conceptual Discussion of Safety
and Health and Implications for the
Workplace**
OCC, B116

**RT 231 American Board of Industrial
Hygiene Forum**
OCC, D139

**RT 232 Ethical Decision Making in
Sustainability and Management Systems**
OCC, F152

**RT 233 Incorporating Life Cycle Analysis in
Business: Opportunities for the EHS
Professional**
OCC, A106

**RT 234 Risk Assessment Applied to
Engineered Nanomaterials: Managing Risk
with Limited Data**
OCC, Oregon 201

10:00 a.m.-12:20 p.m.

**PO 121 Case Study Methodologies for Skin
and Respiratory Exposures**
OCC, Oregon 204

PO 122 International Globalization
OCC, F149

10:00 a.m.-12:40 p.m.

**PO 123 Environmental Issues for Industrial
Hygienists**
OCC, Oregon 203

PO 124 Respiratory Protection II
OCC, C121

11:00 a.m.-2:30 p.m.

ST-06 Portland Spirit
Walk to Waterfront from the Hilton; meet
at 11:00 a.m. in the Main Lobby, 6th St.

11:30 a.m.-12:30 p.m.

**CR 316 PSM, RMP and CalARP Update
and Resources for Employers**
OCC, B113

Noon-1:00 p.m.

**Luncheon Discussions — Volunteer Groups
"Tech Talks"**
OCC, Expo, Hall D

12:30 p.m.-1:30 p.m.

Cummings Award Lecture
OCC, D136

12:30 p.m.-2:00 p.m.

Unsolved IH Mysteries Workshop
OCC, D133

1:00 p.m.-2:00 p.m.

**CR 317 Acquisition to Integration as Part of
a Management System**
OCC, D138

**CR 318 Utilizing ANSI B11 for Machine
Guarding Risk Assessment: Achieving
Acceptable Risk**
OCC, D139

1:00 p.m.-3:20 p.m.

**PO 125 Health Care Industries II:
Construction, PPE and Other Topics**
OCC, B110

1:00 p.m.-3:30 p.m.

**RT 235 Effective Competent Persons for
Illness and Injury Prevention Programs and
OSHA Compliance**
OCC, B116

**RT 236 Emerging Technologies and
Industries: OSHA's Approach, Activities, and
Audience Exchange**
OCC, Oregon 203

**RT 237 Making Changes: Embracing an
Uncertain Future and Thriving**
OCC, F152

RT 238 Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy
OCC, C121

SS 003 Science Symposium: New Paradigms for Exposure and Risk Assessment — Taking Alternative Temporal Exposure Patterns to Task
OCC, Oregon 204

1:00 p.m.-3:40 p.m.

PO 126 Reconstruction of Exposures: Methods and Application
OCC, B113

1:00 p.m.-4:00 p.m.

PO 127 New Issues in Biological and Chemical Sampling and Analysis
OCC, B119

RT 239 10 Years Later: What Have We Learned from the WTC Attacks?
OCC, Oregon 202

RT 240 The NIOSH Personal Protective Technologies Program
OCC, F149

RT 241 OSHA's I2P2: Should I Be Worried?
OCC, A106

1:00 p.m.-5:00 p.m.

RT 242 REACH Is Here: How and Where Its Impact Will be Felt by IH Professionals
OCC, Oregon 201

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

Emerging Issues Forum 1: Specializing: Keeping Yourself Relevant in the Changing Market
OCC, A108

2:30 p.m.-3:30 p.m.

CR 319 Slip Simulator Training: Slip-Trip-Fall Prevention
OCC, D139

5:00 p.m.-6:00 p.m.

CR 320 EHS, Lean and Six Sigma
OCC, B113

CR 321 The Aging Work Force: Occupational Safety, Health, Hygiene and Wellness Considerations
OCC, C126

5:00 p.m.-7:00 p.m.

PO 128 Risk Assessment Methods and Applications
OCC, B110

PO 129 Nanotechnology: Assessment and Control
OCC, B119

5:00 p.m.-7:30 p.m.

RT 243 Effective Adult SH&E Training Techniques: Some Tips and Lessons Learned
OCC, B116

RT 244 Hazardous Drugs in Health Care - State of the Science and Emerging Issues
OCC, C121

AIHA®

7:00 a.m.-9:00 a.m.

Career and Employment Services Committee Meeting
OCC, E144

8:00 a.m.-9:30 a.m.

Pharmaceutical Round Robin Committee Meeting
OCC, E143

9:30 a.m.-11:00 a.m.

AIHA Past Presidents' Brunch (by invitation)
The Nines, Georgian Room

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

Healthcare Working Group Meeting
OCC, E141

Indoor Environmental Quality Committee
OCC, E145

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

Construction Committee Meeting
OCC, E146

10:00 a.m.-11:00 a.m.

ANSI/AIHA ASC Officers Meeting
OCC, VIP Suite D

Noon-1:00 p.m.

Violet Council Meeting
OCC, E142

1:00 p.m.-3:00 p.m.

Academic SIG Meeting
OCC, E141

ANSI/AIHA Z9 Ventilation System Standards Committee Meeting
OCC, E143

Consultants SIG Business Meeting
OCC, E144

Incident Preparedness and Response Working Group Meeting
OCC, E148

Indoor Environmental Quality SIG Meeting
OCC, E147

Noise Committee Meeting
OCC, E146

1:30 p.m.-3:00 p.m.

PCIH-Risk Assessment Symposium Task Force
OCC, E142

Note Meeting Rooms . . .

OCC = Oregon Convention Center

3:30 p.m.-5:30 p.m.

Control Banding Working Group Meeting
OCC, E144

Environmental Issues SIG Meeting
OCC, E147

Ergonomics Committee Meeting
OCC, E146

4:00 p.m.-6:00 p.m.

ANSI/AIHA Z88 Respiratory Protection Standards Committee Meeting
OCC, E148

Fellows SIG Meeting
Hilton, Grand Ballroom II

Permanent Conference Committee Meeting
OCC, E143

6:30 p.m.-8:00 p.m.

AIHA President's reception (by invitation)
The Nines, Ballroom

Ancillary

9:00 a.m.-11:00 a.m.

Industrial Hygienists Without Borders
OCC, E148

1:00 p.m.-5:00 p.m.

28th Annual Pharma Forum sponsored by Patheon
Croune Plaza, Belmont Ballroom

1:30 p.m.-5:00 p.m.

Forest Products Industrial Hygiene Forum sponsored by NCASI
Hilton, Studio Suite

American Petroleum Institute (API) Workshop for Oil and Natural Gas Participants
Hilton, Pavilion Ballroom

3:00 p.m.-6:00 p.m.

American Association of Railroads (AAR) Railroad Industrial Hygiene Forum
Hilton, Broadway II

5:00 p.m.-7:30 p.m.

AIHA Chicago Local Section AIHCE Reception
*Jake's Grill Restaurant,
611 SW 10th Avenue*

5:30 p.m.-7:30 p.m.

University of South Florida Reception
Hilton, Directors Suite

+ Technical Program: Wednesday

GENERAL SESSION



8:00 a.m.–9:00 a.m.
OCC, Portland Ballroom

OSHA: Initiatives, Challenges, Directions

David Michaels, PhD, MPH

Assistant Secretary of Labor
OSHA
Washington, DC

Under the leadership of Dr. David Michaels, OSHA has launched new initiatives and made

significant progress. Hear OSHA's plans for the future and current initiatives articulated and learn how they may affect your practice of occupational and environmental health and safety.

Dr. Michaels will hold an *Ask the Expert* session from 10:00 a.m.–11:30 a.m. in room B119.

This general session is sponsored by



United Phosphorus Limited

Exhibitor Product Demos and Presentations

9:30 a.m.–10:30 a.m. | Expo Theater, Hall D

9:30 a.m.

Mercury Tracker 3000IP — Real Time, Continuous Reading Mercury Vapor Analyzer, Mercury Instruments USA

Avoid problems related to mercury contamination! The Mercury Tracker 3000 IP portable mercury detection system is a lightweight, compact and rugged instrument for measuring the mercury concentration in air. Unlike the gold film-based systems, mercury vapor measurements are displayed and recorded continuously in real time, using cold vapor atomic absorption spectrometry (CVAAS) the only OSHA, NIOSH, ACGIH and EPA certified method for mercury vapor analysis. The Mercury Tracker 3000IP does not require "Regeneration."

10:00 a.m.

Reducing Strains, Sprains and Repetitive Stress Injuries with a Proven Best Management Practice — Active Release Techniques, ART Corporate Solutions

MSDs (musculoskeletal disorders), strains, sprains, overuse, and repetitive stress/strain injuries are often costly to employers and challenging to health and safety professionals to prevent or minimize. Active Release Techniques (ART) has developed a patented wellness and first aid initiative that has proven to help over 175 employers trim both OSHA recordables and expenses in the area of soft tissue injuries by 50 to 80%. Brief program discussion with demonstrations will be provided.



Showtime 7:45 a.m. — Sax in the City

This collection of saxophones (5 different sizes) plus percussion has enchanted Oregonians for years. Jazz, rock, swing, you name it — they play it!

CR 314

Construction Noise: Managing Community Expectations

10:00 a.m.–11:00 a.m. + OCC, B113

Presenter: B. Pittman, CH2M HILL, Salem, OR; S. Mader, CH2M HILL, Portland, OR.
Moderator: D. Johnson, SAIF Corporation, Salem, OR. **Monitor:** R. Brauch, Casella CEL, Inc., Amherst, NH.

Currently, cities and states have a diversity of community noise regulations that impact large scale highway/bridge construction. Frequently, the challenges and constraints of managing construction noise are not addressed in pre-bid documents. This presentation will review the impacts of community noise regulations and discuss the methods used to manage construction noise on four major highway/bridge projects. Important issues to address prior to construction, including the identification of impacted communities and requirement for variances, will also be discussed.

CR 315

OSHA Local and National Emphasis Program Inspections — How Companies Can Get Prepared

10:00 a.m.–11:00 a.m. + OCC, B110

Presenter: M. Taylor, Arent Fox LLP, Washington, DC.

Every year, the Occupational Safety and Health Administration conducts approximately 20,000 national and local emphasis program inspections at various work sites across the country. OSHA currently has several national emphasis programs focusing on the chemical industry, combustible dust, flavoring chemicals/diacetyl, hazardous machinery, lead, nursing, petroleum refineries, recordkeeping, shipbreaking, silica, and trenching and excavation. OSHA also has 140 local emphasis programs. National and local emphasis programs are tools in which the agency can maximize resources by focusing on specific hazards or industries.

Ask the Expert

With Dr. David Michaels, PhD, MPH

10:00 a.m.–11:30 a.m. + OCC, B119

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

PO 119

All Things Radiation

10:00 a.m.–Noon + OCC, D136

Arranger: S. Shindel, Intel Corporation, Chandler, AZ. **Moderator:** R. Hitchcock, LightRay Consulting, Inc., Cary, NC.
Monitors: M. Britsch, Indianola, IN; C. Lungu, University of Alabama at Birmingham, Birmingham, AL.

10:00 a.m.

Laser Safety Program at Woods Hole Oceanographic Institution. (PO 119-1)
R. Reif, Woods Hole Oceanographic Institution, Woods Hole, MA.

10:20 a.m.

Case Studies in Radiation Risk Communication. (PO 119-2) R. Johnson, Dade Moeller and Associates, Inc., Gaithersburg, MD.

2nd International Symposium on Wood Dust

Tuesday, May 17: 9:00 a.m.–5:00 p.m.
Wednesday, May 18: 9:00 a.m.–1:00 p.m.

10:40 a.m.

Estimating Spectral Error in Solar Ultraviolet Radiation Measurements from Broadband Detectors. (PO 119-3)
M. Phillips, Y. Janah, University of Oklahoma, Oklahoma City, OK.

11:00 a.m.

Field Testing EMF Survey Instruments. (PO 119-4) D. Baron, dB-emf, Austin, TX.

11:20 a.m.

Practical Application of the ANSI/IEEE RF Safety Program Standard to Cellular/Wireless Antenna Sites. (PO 119-5)
R. Curtis, Curtis Engineering & Management Services, South Jordan, UT.

11:40 a.m.

Practical Application of the ANSI/IEEE RF Safety Program Standard to Radio/TV Broadcast Antenna Sites. (PO 119-6)
R. Curtis, Curtis Engineering & Management Services, South Jordan, UT.

PO 120

Alternate Exposure Assessment Strategies

10:00 a.m.–Noon + OCC, Oregon 202

Arranger: M. Vadali, University of Minnesota, Brooklyn Park, MN. **Moderator:** C. Simmons, ENVIRON International Corporation, Chicago, IL. **Monitors:** P. Middendorf, NIOSH, Cincinnati, OH; S. Arnold, EHS LLC, Roswell, GA.

10:00 a.m.

Comparison of a Two-Zone (Near Field-Far Field) Exposure Model with Computational Fluid Dynamics (CFD) and Spatial Concentration Distributions Measured in a Simulation Chamber to Estimate Breathing Zone Concentrations and Bystander Exposure Factors. (PO 120-1)
D. Hall, C. Strode, E. Rasmuson, J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

10:20 a.m.

A Comparison on the Characteristics of Benzene Exposure Between the Coal Chemical and Petrochemical Refining Method During Turnaround. (PO 120-2)
E. Chung, Korea Occupational Safety and Health Agency, Incheon, Republic of Korea.

Wednesday, May 18

WD 503

Monitoring and Control

9:00 a.m.–1:00 p.m. + OCC, A108

Arrangers and Moderators: M. Harper, NIOSH, Morgantown, WV; P. Görner, INRS, Vandoeuvre, France. **Monitor:** S. Kim, NIOSH, Morgantown, WV.

9:00 a.m.

Sampling Efficiency of Inhalable Wood Dust Samplers. (WD 503-1) P. Görner, X. Simon, R. Wrobel, INRS, Vandoeuvre, France.

9:20 a.m.

Workplace Wood Dust Sampling With Close-face Cassette and With Selected Inhalable Aerosol Samplers. (WD 503-2)
E. Kauffer, R. Wrobel, X. Simon, P. Görner, C. Rott, M. Grzebyk, O. Witschger, Institut National de Recherche et de Sécurité (INRS), Vandoeuvre-les-Nancy, France.

9:40 a.m.

Comparison of Personal Samplers for Wood Dust Sampling. (WD 503-3) T. Lee, M. Harper, J. Slaven, NIOSH, Morgantown, WV.

10:00 a.m.

Use of Mid-Infrared Diffuse Reflection for Estimation of Wood Dust Exposure. (WD 503-4) M. Chirila, M. Harper, NIOSH, Morgantown, WV.

10:40 a.m.

Peak Exposure to Wood Dust at Production of Wood Pellets — How Much Do They Contribute to the Exposure? (WD 503-5)
K. Hagström, H. Arvidsson, I. Bryngelsson, Department of Occupational and Environmental Medicine, Örebro, Sweden;

E. Andersson, Department of Occupational and Environmental Medicine, Göteborg, Sweden; K. Eriksson, Department of Occupational and Environmental Medicine, Umeå, Sweden.

11:00 a.m.

Wood Dust and Formaldehyde. (WD 503-6)
H. Gill, University of British Columbia, Vancouver, BC, Canada.

11:20 a.m.

Dust Collection Performance Evaluation of Portable Woodworking Machines. (WD 503-7)
J. Fontaine, INRS, Vandoeuvre, France.

11:40 a.m.

The Vertical Panel Saw: Machine Decontamination Index and Operator Wood Dust Exposure. (WD 503-8) F. Keller, F. Henry, INRS, Vandoeuvre les Nancy, France.

Noon

Construction Solutions Database. (WD 503-9) J. Le, J. Platner, CPWR — The Center for Construction Research and Training, Silver Spring, MD.

Symposium Co-Chairs:

- + Dr. Martin Harper, CIH, NIOSH
- + Dr. Peter Görner, INRS (France)

Symposium Sponsors



Celebrate the 40th Anniversary of the OSH Act

Sign the Anniversary Card!

OSHA celebrates 40 years of accomplishments in the workplace

40 OSHA

AIHce 2011 is celebrating the 40th Anniversary of the OSH Act, which created OSHA and NIOSH. Special recognition will occur during the Wednesday General Session, which includes a keynote presentation by OSHA Director, Dr. David Michaels. Show your support for the OSH Act by signing the specially created anniversary card in the Lobby. We are hoping to get thousands of signatures, so please stop by and sign the card!

+ Technical Program: Wednesday

10:40 a.m.

Validation of the USEPA Integrated Exposure Uptake Biokinetic Model (IEUBK) at High Levels of Lead Exposure among Children Living Near an Active Lead Smelter in Shymkent, Kazakhstan.

(PO 120-3) J. Rasmuson, A. Korchevskiy, D. Hall, R. Strode, D. Larson, E. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; R. Olsen, CDM, Inc., Denver, CO.

11:00 a.m.

Design and Execution of an MDI Exposure Assessment: Lessons Learned and a Brief Comparison of Two Analytical Methods — OSHA 47 and IsoChek.

(PO 120-4) M. Hutchison, G2 Consultants, Inc., Lake Oswego, OR.

11:20 a.m.

Determining Particulate Containment Through Surrogate Monitoring at Pharmaceutical Companies in India.

(PO 120-5) G. Desai, International Safety Systems, Inc., Vadodara, India; M. Mehta, International Safety Systems, Inc., New York, NY.

11:40 a.m.

New Basis for Interpreting Historical Exposures to Dust from Chrysotile-Containing Joint Compound.

(PO 120-6) P. Sheehan, G. Brorby, K. Bogen, Exponent, Oakland, CA; W. Berman, Aeolus, Inc., Albany, CA; S. Holm, Georgia-Pacific LLC, Atlanta, GA.

RT 230

A Conceptual Discussion of Safety and Health and Implications for the Workplace

10:00 a.m.–Noon + OCC, B116

Arranger: K. Slates, Indiana University, Bloomington, IN. **Moderator:** L. Goodridge, Chevron, Covington, LA. **Monitors:** J. Lucas, Cordis Corporation, Warren, NJ; W. Jones, Labor's H & S Fund of North America, Washington, DC.

The minority special interest group (SIG) is pleased to sponsor the following roundtable. We hope that our topics encourage meaningful dialogue and debate that will raise questions and challenge our assumptions as they relate to contemporary issues in occupational safety and health. The following roundtable speakers Dr. Samuel Oyewole, Dr. Leza Brown, and Larry Newton CSP, CIH, and Julius Rhodes have distinguished themselves as subject matter experts in academia, industry and government. The

panel discussion format will lead conceptual discussions and encourage audience participation on the following topics: • Mentoring minorities in the field of safety and health: Is there a need? • What organizational variables contribute to safety performance? • Safety leadership and resource allocation • Illness and injury disparities: Do injury and illness disparities exist? If so where and what can be done about it? • Healthy Homes? What effect can social determinates have on safety and health outcomes in low income housing?

+ An Examination of Psychosocial Stressors and Occupational Injuries and Illnesses in Hispanics and African Americans.

L. Brown, Illinois State University, Normal, IL.

+ Healthy Homes: Residential Safety and Health Hazards and At-risk Populations.

K. Slates, L. Newton, Indiana University, Bloomington, IN.

+ Cultivating the Future: Leadership and Mentoring in the EHS Profession.

J. Rhodes, SPHR, Chicago, IL.

+ Safety Leadership and Decision-Making: Implementing an Effective Resource Allocation Program.

S. Oyewole, Penn State University, PA.

+ Safety Leadership.

D. Hill, ABB Inc., Southfield, MI.

RT 231

American Board of Industrial Hygiene Forum

10:00 a.m.–Noon + OCC, D139

Arranger and Moderator: L. O'Donnell, ABIH, Lansing, MI. **Monitors:** R. Drafta, B. Snow, ABIH, Lansing, MI.

How do you become a Certified Industrial Hygienist? Once certified, how do you maintain your certification? ABIH Board members and staff will present information on certification topics, address comments and questions from the audience and seek audience input on ABIH's direction and programs.

RT 232

Ethical Decision Making in Sustainability and Management Systems

10:00 a.m.–Noon + OCC, F152

Arranger and Moderator: J. Baker, ERM Inc., Exton, PA. **Monitors:** L. Barnes, Bureau Veritas North America, Inc., Lakewood, CO; M. Johnson, IHS, Englewood, CO.

Competitive pressures on EHS professionals from customers, clients, government, internal management, and specific interests may present situations that test our capabilities around ethical decision-making. Through case studies and discussion, this roundtable examines the meaning of "ethics in business," ethical behavior as a foundation of management systems, ethical lapses in environmental data reporting, and the future of ethics for EHS professionals in the global business setting of the 21st century.

+ The Grammar of Ethics and the Dynamics of Sustainability Management.

E. Quevedo, Paladin Law Group, LLP, Walnut Creek, CA.

+ Ethical Decision Making in Setting Global EHS Standards.

A. Leibowitz, ITT Corporation, White Plains, NY.

+ Dealing Ethically with Sensitive Information in Management System Auditing.

T. Dunmire, ENLAR Compliance Services, Largo, FL.

+ Impacts of Personal Ethical Behavior on the Sustainability of Management Systems.

G. Barbi, BD, Franklin Lakes, NJ.

RT 233

Incorporating Life Cycle Analysis in Business: Opportunities for the EHS Professional

10:00 a.m.–Noon + OCC, A106

Arranger and Moderator: D. Martin, Pacific Biosciences, Menlo Park, CA. **Monitors:** K. Krause, EORM, San Jose, CA; W. Cyr, ChemRisk, San Francisco, CA.

The practice of Life Cycle Assessment (LCA) uses a comprehensive method to analyze environment and health (EHS) impacts of products and processes. With the growing focus toward sustainability businesses are expected to be more transparent regarding their strategies to lessen their impacts. The LCA approach is increasingly being used by businesses for a wide variety of uses including: support of environmental claims, comparing products, assessing carbon footprints, and to lessen impacts associated with process and production. This session will aim to provide an overview of the LCA process and tools used for analysis. The session will also illustrate business case studies and will highlight the important role of the EHS professional in the process.

+ Introduction to Life Cycle Analysis.

C. Kral, WSP Group, San Francisco, CA.

- + **Driving Sustainable Product Development in the Supply Chain.** C. Bradlee, BASF Corporation, Ypsilanti, MI.
- + **Life Cycle Analysis (LCA) of Wireless Mobile Products.** B. Olson, Mobile Devices Business, Libertyville, IL.
- + **Integrating Life Cycle Analysis into Genencor's Business.** B. Concob, Genencor, Palo Alto, CA.

RT 234

Risk Assessment Applied to Engineered Nanomaterials: Managing Risk with Limited Data

10:00 a.m.–Noon + OCC, Oregon 201
Arranger and Moderator: C. Laszcz-Davis, The Environmental Quality Organization, Lafayette, CA. **Monitors:** G. Dotson, NIOSH, Cincinnati, OH; B. Stockmeier, Argonne National Laboratory, Argonne, IL.

The manufacture and use of engineered nanomaterials raises the same types of issues and questions relative to the potential impact on human health presented by many new emerging technologies. Traditionally, industrial hygiene professionals rely on the results of quantifiable human health risk assessments to develop and implement risk management programs. The general role, concepts and tools of human health risk assessment remain relevant and operational in the evaluation of engineered nanomaterial risk; however, currently there are considerable gaps in our knowledge of the variables for quantifying risk assessment of these materials. This roundtable will focus on the issues and elements involved in developing risk assessment and identify and characterize the major knowledge gaps. Roundtable panel representatives include national leaders in their respective fields and will focus on what is known about nanomaterial toxicity, exposure assessment and hazard analyses, and will discuss risk management decision-making when the information needed for quantitative risk assessment is limited. This roundtable will provide the industrial hygienist with the current state of risk assessment knowledge on toxicity and exposure assessment of engineered nanomaterials.

- + **Nanomaterials and Risk Assessment Overview.** M. Jayjock, Linea, Inc., Langhorne, PA.
- + **Nanomaterials Toxicology—The Known, Extensions of Current Knowledge and Unknowns.** G. Oberdörster, University of Rochester, Rochester, NY.

- + **Nanomaterials Exposure Assessments — Status of the Science and Knowledge.** C. Geraci, NIOSH, Cincinnati, OH.
- + **Nanomaterials Risk Management Approaches.** L. Gibbs, Stanford University, Stanford, CA.
- + **Wrap-Up and Highlights.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.

PO 121

Case Study Methodologies for Skin and Respiratory Exposures

10:00 a.m.–12:20 p.m. + OCC, Oregon 204
Arranger: M. Vadali, University of Minnesota, Brooklyn Park, MN. **Moderator:** R. Jones, University of Illinois at Chicago, Chicago, IL. **Monitors:** G. Bangs, US EPA, Washington, DC; J. Stewart, Harvard University, MA.

- 10:00 a.m.**
Chemical Occupational Asthma: Is Skin Exposure the Missing Piece of the Puzzle? (PO 121-1) T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.
- 10:20 a.m.**
Occupational Exposure to Artificial Butter Flavorings: A State-of-the-Art Analysis. (PO 121-2) D. Hollins, D. Galbraith, B. Finley, ChemRisk, San Francisco, CA; J. Pierce, ChemRisk, Chicago, IL.
- 10:40 a.m.**
Development of Method and Preliminary Field Results for Measurements of Skin Exposure During Secondary Water Contact Recreation. (PO 121-3) S. Cali, D. Das, J. Piatek, R. Lopez, S. Dorevitch, P. Scheff, University of Illinois at Chicago, Chicago, IL.
- 11:00 a.m.**
Using Qualitative Exposure Assessment for Occupational Contact Dermatitis. (PO 121-4) A. Sussell, NIOSH, Cincinnati, OH.
- 11:20 a.m.**
Allergic Contact Dermatitis (ACD): How Should We Evaluate Sensitizer Exposures? (PO 121-5) T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.
- 11:40 a.m.**
Comparison of Simulated vs. Actual Worker Exposures to Airborne BFRs. (PO 121-6) C. Torres, ENVIRON International Corporation, Monument, CO; M. Buckalew, ENVIRON International Corporation, Atlanta, GA.

Noon

Validating Aggressive Air Sampling for Beryllium Clearance. (PO 121-7) E. Wenger, Burns & McDonnell, Kansas City, MO; D. Weitzman, P. Wambach, U.S. Dept. of Energy, Washington, DC; K. Kerr, U.S. Dept. of Energy, Kansas City, MO; J. Wyckoff, Honeywell Federal Manufacturing & Technologies, Kansas City, MO.

PO 122

International Globalization

10:00 a.m.–12:20 p.m. + OCC, F149
Arranger and Moderator: N. Yin, Warner International, Inc., Morris Plains, NJ. **Monitors:** W. Lin, P. Chen, National Taiwan University, Taipei, Taiwan.

- 10:00 a.m.**
Best Practices for Chemical Management in a Computer-Driven Age — Case Studies. (PO 122-1) K. Kawar, Actio Corporation, Naperville, IL.
 - 10:20 a.m.**
Exposure of Egyptian Cotton Workers to the Pesticide Chlorpyrifos. (PO 122-2) K. Galvin, R. Fenske, University of Washington, Seattle, WA; F. Farahat, Menoufia University, Shibin el Kom, Egypt.
 - 10:40 a.m.**
Health Hazard Evaluation of the Princess Margaret Hospital in Nassau, the Bahamas. (PO 122-3) T. Niemeier, NIOSH, Cincinnati, OH; M. Kiefer, NIOSH, Denver, CO.
 - 11:00 a.m.**
Things Behind the Occupational Safety Accidents of Coal Mining Industry in China. (PO 122-4) X. LIU, Saint Louis University, St. Louis, MO.
 - 11:20 a.m.**
Case Study: Using the GHS Transition Checklist to Ensure Global Regulatory Compliance. (PO 122-5) L. Seguin, KMK Regulatory Services Inc., Blainville, QC, Canada.
 - 11:40 a.m.**
Abu Dhabi EHSMS — World's First Integrated Regulatory System. (PO 122-6) C. Sall, Abu Dhabi EHS Center, Abu Dhabi, United Arab Emirates.
- Noon**
H&S in a Genuine "No Sweat" Garment Factory. (PO 122-7) G. Brown, Maquiladora Health & Safety Support Network, Berkeley, CA.

+ Technical Program: Wednesday

PO 123

Environmental Issues for Industrial Hygienists

10:00 a.m.–12:40 p.m. + OCC, Oregon 203

Arranger: L. Wong, University of California, Oakland, CA. **Moderator:** E. Erikson, Guida, Slavich & Flores, Dallas, TX. **Monitors:** M. Gillie, GeoTrans, Inc., King of Prussia, PA; S. Celly, Celly Services, Inc., Long Beach, CA.

10:00 a.m.

Rachel Carson Award. E. Erikson, Guida, Slavich & Flores, Dallas, TX.

10:20 a.m.

Efficacy of Methamphetamine Decontamination for Clothing and Building Materials. (PO 123-1)

K. McInnis-Serrano, M. Van Dyke, J. Martyny, National Jewish Health, Denver, CO.

10:40 a.m.

Analysis of Air Quality Data from a Fixed Monitoring Site for Implications for a Nearby Coast Guard Facility. (PO 123-2)

L. Whitehead, T. Stock, L. Pompeii, D. Beasley, C. Maypole, University of Texas Houston, TX.

11:00 a.m.

Now, What's That Smell? Challenges of Community Odor Evaluation. (PO 123-3)

E. Shamberger, Bureau Veritas North America, Akron, OH.

11:20 a.m.

Deepwater Horizon Response — Redefining ICS and the Safety Officer's Role. (PO 123-4)

L. Hartline Weems, U.S. Coast Guard, Washington, DC.

11:40 a.m.

NOAA's Office of Response and Restoration Response to the Deepwater Horizon Spill: Safety Challenges and Lessons Learned. (PO 123-5)

N. Barnea, NOAA ORR, Seattle, WA.

Noon

Evaluating Workers' Potential Asbestos Exposure During Handling, Installation, Cutting, Sanding and Cleanup of Vinyl Asbestos Floor Tile. (PO 123-6)

A. Bilenki, L. Burrelli, J. Spencer, Environmental Profiles, Inc., Columbia, MD.

12:20 p.m.

Control Guidance on the Exposure Associated with the Use of Carbon Tetrachloride Substitutes in Various Industrial Sectors in India — A Case Study. (PO 123-7)

K. Mukhopadhyay, S. Sambandam, A. Ramalingam, K. Balakrishnan, Sri Ramachandra University, Chennai, India.

PO 124

Respiratory Protection II

10:00 a.m.–12:40 p.m. + OCC, C121

Arranger: J. Noble, Ascend Performance Materials, Gonzalez, FL. **Moderator:** J. Johnson, JSJ and Associates, Pleasanton, CA. **Monitors:** N. Gaydos, PPG, Pittsburgh, PA; J. Noble, Ascend Performance Materials, Gonzalez, FL.

10:20 a.m.

Performance of Conventional and Antimicrobial-Treated Filtering Facepiece Respirators Against Viable Influenza Virus A. (PO 124-1)

N. McCullough, J. Sebastian, A. Viner, 3M Company, St. Paul, MN; M. Lore, T. Brown, S. Hinrichs, University of Nebraska, Omaha, NE.

10:40 a.m.

Bioaerosol Interaction with Respirators: The Efficacy of Antimicrobial Treatment as Tested by a Standard Test Method and by a Bioaerosol Test Method. (PO 124-2)

C. Ylitalo, J. Sebastian, A. Viner, N. Stepanova, 3M Company, St. Paul, MN.

11:00 a.m.

Workplace Protection Factors for Two Types of N95 Respirators Used on Farms for Respiratory Protection Against Bioaerosols. (PO 124-3)

K. Cho, T. Reponen, R. McKay, A. Adhikari, U. Singh, A. Dwivedi, R. Shukla, S. Grinshpun, University of Cincinnati, Cincinnati, OH; S. Jones, G. Jones, Western Kentucky University, Bowling Green, KY.

11:20 a.m.

Physiologically Based Pharmacokinetic (PBPK) Modeling for Evaluating the Effect of Dermal Absorption of Vapors on the Measurement of Workplace Protection Factors (WPFs). (PO 124-4)

W. Groves, B. Pullampally, Penn State University, University Park, PA.

11:40 a.m.

Field of View of Commercial Air-Purifying Respirators. (PO 124-5)

K. Coyne, D. Barker, U.S. Army, Aberdeen Proving Ground, MD; T. Rice, Science Applications International Corporation, Abingdon, MD; B. Elmore, Aberdeen High School, Aberdeen, MD.

Noon

Ultrasound for in situ Estimation of Respirator Fit. (PO 124-6)

W. King, J. Szalajda, NIOSH, Pittsburgh, PA.

12:20 p.m.

Exposure Assessment Associated with the Use of Respirators. (PO 124-7)

C. Manning, Assay Technology, Livermore, CA.

CR 316

PSM, RMP and CalARP Update and Resources for Employers

11:30 a.m.–12:30 p.m. + OCC, B113

Presenters: W. Scheitrum, Britz, Inc., Fresno, CA; P. Thomas, California Control Atmosphere, Dinuba, CA. **Moderator:** C. Willey, Sigma-Aldrich, St. Louis, MO. **Monitor:** C. Haynes, University of North Alabama, Florence, AL.

These three federal and state OSHA/EPA regulations (PSM, RMP, and CalARP) continue to be burdensome and expensive for employers. At \$32,500 fines/location/day, these regulations will challenge EHS professionals to maintain compliance. With the recent BP incident, industries that were once exempt from these regulations are slowly having their exemptions removed. This includes fertilizer, combustible gas, and propane distributors. This is a "must-attend" presentation to keep you abreast of the regulatory updates and requirements.

Exhibitor Product Demos and Presentations

Noon–1:00 p.m. + Expo Theater, Hall D

Noon

Gasmet Model DX-4030, World's First Truly Portable FTIR Multi-Component Gas Analyzer, Gasmet Technologies Inc.

The Gasmet Model DX-4030 measures 25 gases simultaneously at sub-ppm detection levels in one field, rugged and user-friendly package. For Hazmat applications, the DX-4030 Analyzer provides the ability to identify "unknown" gases by searching the NIST/EPA library of over 5,000 gases. This can be performed within just minutes after arriving at the incident site. Applications include monitoring: (1) VOCs, i.e., Acrolein, Acetone, Alcohols, Hexane, Benzene, Toluene, Diacetyl; (2) Toxic Gases such as HCl, HF, Ammonia, Phosphine, TICs and CWAs; (3) Hospital Gases including waste Anesthetics (Wags), Formaldehyde, Hydrogen Peroxide and Ethylene Oxide; (4) Contaminate waste sites monitoring for Chlorinated Hydrocarbons such as PERC, TCE, DCM or aromatic H/Cs.

12:30 p.m.

GrayWolf's AdvancedSense™ Meter; Innovative IH/IAQ Data Collection, GrayWolf Sensing Solutions

GrayWolf introduces the cutting-edge AdvancedSense environmental meter (w/embedded computer) to record data and on-site observations reliably and efficiently. Measure a broad range of IH and IAQ parameters, including VOCs, Carbon Dioxide, Particulate, Airflow, Differential Pressure, Ozone, H2S, %RH and more. This presentation will show some of this meter's powerful productivity tools that enable simple, well-documented data collection; the addition of audio, text and video notes attached right to the data files; and easy report generation.

Luncheon Discussions

Volunteer Group "Tech Talks"

Noon–1:00 p.m. + OGC, Expo, Hall D

Luncheon Discussions are small, highly interactive group discussions facilitated by representatives from various AIHA Volunteer Groups. The topics presented reflect current trends and high-interest, relevant issues from each Volunteer Group's technical content. Purchase lunch and select a discussion—seating is first-come, first-served.

1. ANSI/AIHA® Standards—Z10, Z88, Z9

Moderators: J. Howe, Medford, OR; J. Johnson, JSJ and Associates, Pleasanton, CA; and J. Price, Northeastern University, Boston, MA.

2. Biosafety and Environmental Microbiology Committee

Moderator: R. Strode, Chemistry & Industrial Hygiene, Inc. (C&IH), Denver, CO.

3. Clandestine Laboratory Working Group

Moderator: J. Devalois, KEMWest, Inc., Denver, CO.

4. Communication and Training Methods Committee

Moderator: D.C. Breeding, Texas A&M University, College Station, TX.

5. Computer Applications Committee

Moderator: K. Diep, American Airlines, Fort Worth, TX.

6. Confined Spaces Committee

Moderators: C. Clarke, Ascend Performance Materials, Pensacola, FL; B. Rush, IHI Environmental, Salt Lake City, UT; E. Willwerth, AE&MS, Inc., Grafton, MA.

7. Construction Committee

Moderator: R. Suga, Bechtel Jacobs LLC, Oak Ridge, IL.

8. Control Banding Working Group and Nanotechnology Working Group

Advances in Control Banding to Anticipate, Recognize, Evaluate, Control, and Confirm Worker Safety and Health

Moderators: D. Heidel, T. J. Lentz, NIOSH, Cincinnati, OH; M. Hoover, NIOSH, Morgantown, WV.

9. Environmental Issues Committee

Moderator: E. Erikson, Guida, Slavich, & Flores, P.C., Dallas, TX.

10. Ergonomics Committee

Moderator: C. Brigham, 1Source Safety and Health, Inc., Exton, PA.

11. Green Building Working Group

Moderators: L. Nguyen Weeks, InAIR Environmental Ltd., Ottawa, ON; N. Sanders, AQS-BC, Marietta, GA.

12. Healthcare Working Group

Moderator: S. Derman, MediShare Environmental Health & Safety Services, Cupertino, CA.

13. Indoor Environmental Quality Committee

Moderators: L. Albin, Purdue University, West Lafayette, IN; W. Baker, Michaels Engineering, La Crosse, WI; D. Kahane, Forensic Analytical, CA.

14. International Affairs Committee

Moderator: M. Levitsky, ECOH Management Inc., Mississauga, ON.

15. Ionizing Radiation

Moderators: B. Gallagher, Applied Health Physics Inc., Bethel Park, PA; R. Johnson, Dade Moeller Inc., Gaithersburg, MD.

16. Laboratory Health and Safety Committee

Moderator: L. Poore, University of Kentucky, Lexington, KY.

17. Management Committee

Moderator: G. Miller, MM&A LLC, Matthews, NC.

18. Noise Committee

Moderators: R. Brauch, Casella USA, Amherst, NH; L. Hager, 3M, Portland, MI.

19. Non-Ionizing Radiation Committee

Moderator: D. Baron, IEEE, Austin, TX.

20. Occupational Epidemiology

Moderator: T. Armstrong, TWA8HR Occupational Hygiene Consulting, LLC, Branchburg, NJ.

21. Real-Time Detection Systems Committee

Moderators: T. Engel, J. Golden, 3M, St. Paul, MN.

22. Respiratory Protection Committee

Is Your Respirator Program OSHA Compliant?

Moderator: J. Johnson, JSJ and Assoc., Pleasanton, CA; J. Parker, S. Rengasamy, NIOSH, Pittsburgh, PA.

23. Risk Assessment Committee

Moderator: W. Beadie, Maul, Foster and Alongi, Portland, OR.

24. Safety Committee

Moderator: S. Eversmeyer, Port of Portland, Portland, OR.

25. Sampling and Laboratory Analysis Committee

Recent Advances in Passive Sampling

Moderator: M. Eide, Retired, Boise, ID.

26. Social Concerns Committee

Suicides and Cancers in Asian Electronics Factories

Moderator: G. Brown, Maquiladora H&S Support Network, Berkeley, CA.

27. Stewardship and Sustainability Committee

Product Stewardship Registry and other Committee Initiatives

Moderators: D. Deeds, Industrial Health & Safety Consultants, Inc, Woodbridge, CT; K. Thompson, 3M, St. Paul, MN.

28. Toxicology Committee

Moderator: R. Larson, University of Utah, Salt Lake City, UT.

29. Workplace Environmental Exposure Levels

Occupational Exposure Limits Comparisons

Moderator: A. Weinrich, EPA, Cincinnati, OH.

Cummings Award Lecture

A Romanian Odyssey in Occupational Hygiene

12:30 p.m.–1:30 p.m. + OGC, D136



Lecturer: Dr. Roy M. Buchan, CIH Professor Emeritus, Colorado State University

This lecture was written to celebrate and honor one of the pioneers of Occupational

Hygiene, Donald Cummings, the third president of AIHA. Donald Cummings was a man of vision and integrity whose life was cut short at age 42 by an airplane crash while en route to a mining operation in Nevada. When he, along with the other pioneers such as F. Holden, W. Yant, P. Patty, W. Fredrick and C. Poole set about the formation of AIHA, they illustrated integrity and foresight, although I wonder if they had any idea how large the association would become and how

+ Technical Program: Wednesday

important the profession would become on an international basis. It is also, I believe, important to acknowledge that in order to truly be successful in this or any other profession, the association's founding fathers recognized the importance of a sense of humor. As they began the process of selecting the first Board, "We needed a secretary, there was Bill Yant, and he couldn't write, so we made him president." G. Harrold, who was selected as the first secretary, "because he had not learned to pass the buck, therefore ... he should be secretary." (p.23) These themes, particularly collaboration and humor, remained important in my own career as an occupational hygienist, helping first in my academic life, then serving in various roles for both ACGIH and AIHA.

In the early 1990s, I was very fortunate to be able to work in former Eastern Bloc countries following the downfall of communism ... again humor continued to serve as a very useful purpose in very depressed environments. I will focus primarily on my most recent past experience and the current status of our field in Romania. We will touch on the achievements we made in occupational hygiene, and continue to make to this very day: for example, the development of a professional society in occupational hygiene in late 2001. I will also discuss the monumental job of the creation and establishment of both bachelor and master's degree programs in occupational hygiene at Iasi Technical University.

The most important items of discussion will be lessons learned through trial and error and the necessary ingredients that must be put in place to secure success in the promotion and establishment of occupational hygiene as a profession in other countries as they seek to develop economically. The world is a big place, and we face a very challenging task indeed.

Workshop

Sold Out

Unsolved IH Mysteries Workshop

12:30 p.m.-2:00 p.m. + OCC, D133

Facilitator: Robert Gallagher, CIH, CSP, CHP, PE, CHMM, Applied Health Physics, Inc., Dagsboro, DE.

Please . . .

turn off cell phones in all sessions.

CR 317

Acquisition to Integration as Part of a Management System

1:00 p.m.-2:00 p.m. + OCC, D138

Presenters: C. England, ITT Water & Wastewater, Elkhorn, WI; R. Lawson, ITT Electronic System, Fort Wayne, IN. **Monitor:** S. Burrows, University of Central Missouri, Warrensburg, MO.

This presentation will explain the acquisition and integration process that was developed and improved within ITT Corporation. We will cover the success and failures experienced during recent acquisitions, and the importance of ESH being involved in the acquisition process from the very beginning. Acquiring and integrating another company while using a defined Management System allows a company to accurately gauge the environmental, safety and health risk associated with the acquisition, and appropriately define the controls needed to manage the risk.

CR 318

Utilizing ANSI B11 for Machine Guarding Risk Assessment: Achieving Acceptable Risk

1:00 p.m.-2:00 p.m. + OCC, D139

Presenter: P. Zoubek, Zoubek Consulting, LLC, San Diego, CA.

ANSI B11.TR3 is a globally recognized standard for quantitative machine safeguarding risk assessment. In 2008, ANSI published B11-2008, which provides guidance on achieving acceptable risk (or that level at which further risk reduction would not result in significant reduction in risk). This presentation outlines how to perform a machine safeguarding risk assessment using the ANSI.TR3 method and apply ANSI B11-2008 in order to achieved acceptable risk. Participants will perform a hands-on assessment utilizing the ANSI B11 Risk Assessment Method.

PO 125

Healthcare Industries II: Construction, PPE and Other Topics

1:00 p.m.-3:20 p.m. + OCC, B110

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; J. Samuels, Richland, WA.

1:00 p.m.

Helping the Owner and Contractor Project Team Move from ICRA to PCRA. (PO 125-1) J. Martinelli, Forensic Analytical Environmental Health Consultants, Citrus Heights, CA; C. Cannell, Regional West Medical Center, Scottsbluff, NE.

1:20 p.m.

Evaluation of a Program to Protect Hospital Patients from Airborne Aspergillus during an Air Handler Replacement Project. (PO 125-2) I. Goldberg, T. Barton, NYU Langone Medical Center, New York, NY.

1:40 p.m.

Safety By Design: Managing and Designing for Ergonomics. (PO 125-3) C. Bain, Kaiser Permanente, Oakland, CA.

2:00 p.m.

Fit Testing Large Groups of N95 Respirator Users by Integrating a Pump Powered-Nebulizer to the Fit Test Process. (PO 125-4) P. Numoto, S. Colligan, University of Washington, Seattle, WA.

2:20 p.m.

Development of an Exhaled Breath Aerosol Monitoring System. (PO 125-5) W. Lin, S. Huang, C. Chen, National Taiwan University, Taipei, Taiwan; Y. Kuo, Chung Hwa University of Medical Technology, Tainan, Taiwan; C. Chen, C. Chang, Institute of Occupational Safety and Health, Taipei, Taiwan.

2:40 p.m.

The Overlooked Role of State Health Departments in Early Occupational Disease Control: An Analysis of New Jersey Department of Health Activities Prior to 1915. (PO 125-6) M. Holton, R. Adams, ENVIRON International Corporation, Princeton, NJ.

3:00 p.m.

Innovations in Industrial Hygiene and Response to Catastrophic Events. (PO 125-7) J. Koerner, U.S. Dept. of Health and Human Services, Washington, DC.

RT 235

Effective Competent Persons for Illness and Injury Prevention Programs and OSHA Compliance

1:00 p.m.-3:30 p.m. + OCC, B116

Arranger and Moderator: K. Lavaty, Los Alamos Technical Associates, Los Alamos, NM. **Monitors:** T. Borrmann, The Cohen Group, San Mateo, CA; C. Brehm, Michael Baker Jr., Inc., Monn Township, PA.

Absence of a competent person is one of the most frequently cited violations by OSHA. OSHA regulations ranging from “Asbestos” to “Steel Erection” establish the requirement for employers to designate a competent person. While OSHA defines the competent person as one who is capable of identifying existing and predictable hazards and authorized to take prompt corrective measures to eliminate those hazards, this definition leaves a lot of room for interpretation. Some regulations, such as the “Asbestos in Construction” (1926.1101), provide specific training requirements. Other regulations, such as “Excavations” (1926.650) are silent about training or skills needed by competent persons. Lack of specificity undercuts the value of the competent person concept, and leads to wide variation in training designated as “competent person training.” How do EHS professionals determine the basic qualifications for a competent person versus a trenching or scaffold erection contractor? What about OSHA? Is someone a CP per OSHA if nothing bad happens at a job site, but incompetent if something bad happens? What are the qualifications you want to see, how would you know someone is qualified to be your CP? Roundtable speakers will address these questions as they review the role of the competent person and provide criteria to implement effective competent person programs.

- + **Identifying and Addressing Regulatory and Contractual Requirements for Competent Person Issues on Multiemployer Work Sites.** M. Soltis, Tetra Tech NUS, Inc., Pittsburgh, PA.
- + **Developing Competency Objectives for Silica Competent Persons: Report on an AIHA® Construction Committee Workgroup Effort.** M. Gillen, NIOSH, Washington, DC.
- + **Critical Qualities and Authorities for the Competent Person — A Compliance Perspective.** M. Wood, Oregon Occupational Safety and Health Administration, Salem, OR.
- + **Competent Person Requirements in U.S. Army Corps of Engineers Manual 385-1-1 versus Competent Person Requirements in United Federal Guide Specifications.** A. Pouliot, US Army Corps of Engineers, Baltimore, MD.
- + **Definition and Specification of Competent Persons in Safety Management Systems for Construction Projects.** S. Rosen, AIG Construction Risk Management Group, New York, NY.

RT 236

Emerging Technologies and Industries: OSHA's Approach, Activities, and Audience Exchange

1:00 p.m.–3:30 p.m. + OCC, Oregon 203

Arranger: C. Jones, OSHA, Washington, DC. **Moderator:** T. Galassi, OSHA, Washington, DC. **Monitors:** R. Fairfax; M. Hatch, OSHA, Washington, DC.

The occupational safety and health concerns related to emerging technologies and industries are not well defined or well characterized. While important to innovation and to technological and economic growth, these new technologies and industries can and frequently do pose serious risks to workers. While OSHA has always monitored new and emerging workplace hazards as part of its mission, the agency is now taking a more active role in exploring unique, non-regulatory actions it can take to address these risks in the workplace. OSHA discusses its agency-wide approach to identifying, monitoring, and taking action on emerging technologies and industries. It also outlines recent activities related to several emerging technologies and industries including nanotechnology, green jobs, and butter flavoring substitutes. Finally, OSHA opens the discussion to interested audience members to exchange information about emerging issues in their workplace and steps the agency can take to address them.

- + **Identifying and Addressing Workplace Issues with Emerging Technologies and Industries at OSHA.** C. Jones, OSHA, Washington, DC.
- + **Nanotechnology — A Unique Conundrum in OH&S.** J. Carter, OSHA, Cincinnati, OH.
- + **Making Green Jobs Good Jobs — We All Want To, So What is OSHA Doing to Make it Happen?** S. Kanth, OSHA, Washington, DC.
- + **Butter Flavoring Substitutes — Not Really the Answer to Diacetyl.** A. Profitt, OSHA, Washington, DC.
- + **Now to You — Audience Thoughts on OSHA's Approach and Initiatives.** C. Jones, OSHA, Washington, DC.

RT 237

Making Changes: Embracing an Uncertain Future and Thriving

1:00 p.m.–3:30 p.m. + OCC, F152

Arranger and Moderator: C. Hovde, Caterpillar Inc., Roseville, MN. **Monitors:** L. Vivekanand, GE Global Research, Niskayuna, NY; C. Hanko, Marathon Oil, Findlay, OH.

Life and careers are unpredictable. Changes in personal life, industry, and business climate mean that industrial hygienists may need to make changes they never expected. This roundtable will openly discuss potential changes and provide practical advice on how to prepare for them. Speakers will give examples from their own experiences and provide practical tips on what education, networking, and management skills could make those changes/transitions smoother. This session will include a presentation on preventing burnout, which is common to any career field.

- + **Have You Ever Thought About Making a Switch into or Out of Consulting?** T. Blodgett, Target, Minneapolis, MN.
- + **So, You Are Thinking About Academia?** R. Anthony, University of Iowa, Iowa City, IA.
- + **Midlife Career Change.** M. Harris, Hamlin & Harris, Inc., Baton Rouge, LA.
- + **Apathy Has Rained on Me — Preventing Burnout Before Arriving Here.** D. Brown, 3M Company, St. Paul, MN.
- + **When Do I Stop Learning?** T. Blank, L. Robert Kimball & Associates, Coraopolis, PA.

RT 238

Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy

1:00 p.m.–3:30 p.m. + OCC, C121

Arranger: M. Melkonian, Medgate, Inc., Salem, OR. **Moderator:** K. Diep, American Airlines, Fort Worth, TX. **Monitors:** M. Bergner, Crowworld, St. Paul, MN; K. Hawkins, American Electric Power, Dallas, TX.

Industrial hygienists play a critical role within organizations to ensure the health and safety of workers and the general public. Many times it can be difficult to quantify for management the true value you provide to your organization. This session will present success stories and useful tips to help prove the value of industrial hygiene through computer applications.

+ Technical Program: Wednesday

- + **The Business Case for Commercial MSDS Services.** B. Silverstein, TVS Associates, LLC, Yardley, PA.
- + **Value Strategy Tools Based on AIHA* Value Strategy Study.** G. Popov, University of Central Missouri, Warrensburg, MO.
- + **Quantitative Assessment of the Value of IH Computer System at the Metallurgy Company in Central Asia.** A. Korchevsky, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.
- + **Making a Business Case for Integrated OH&S Software Solutions.** M. Melkonian, Medgate, Inc., Salem, OR.
- + **A Road Map to Successful Implementation of Database Management Software.** M. Wan, EOH Consulting, St. Petersburg, FL.

SS 003

Science Symposium: New Paradigms for Exposure and Risk Assessment: Taking Alternative Temporal Exposure Patterns to Task

1:00 p.m.–3:30 p.m. + OCC, Oregon 204

Arranger and Moderator: G. Dotson, NIOSH, Cincinnati, OH. **Monitors:** A. Parker, Toxicology Excellence for Risk Assessment (TERA), Cincinnati, OH.; G. Day, NIOSH, Morgantown, WV.

- + **IH Exposure Assessment Strategies for Task-based Scenarios — Issues and Considerations.** C. Simmons, ENVIRON International Corporation, Chicago, IL.
- + **Risk Characterization Approaches for Non-traditional Temporal Patterns of Exposure: Task-based and Intermittent Exposures.** A. Maier, Toxicology Excellence for Risk Assessment (TERA), Cincinnati, OH.
- + **Timing of Exposure Issues in Assessing Developmental and Reproductive Health Risks.** T. Lewandowski, Gradient – Seattle, Seattle, WA.
- + **Promise and Problems in use of Task-based Exposure Estimation in the Epidemiologic Context.** N. Seixas, University of Washington, Seattle, WA.
- + **Accounting for Temporal Variability in Exposure.** R. Neitzel, University of Washington, Seattle, WA.

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*.

PO 126

Reconstruction of Exposures: Methods and Application

1:00 p.m.–3:40 p.m. + OCC, B113

Arranger and Moderator: S. Maberti, ExxonMobil, Houston, TX. **Monitors:** J. Couch, NIOSH, Cincinnati, OH; P. Dopart, Johns Hopkins University, Baltimore, MD.

1:00 p.m.

Comparison of Three Methods of Retrospective Exposure Assessment in a Case-Control Study of Chronic Beryllium Disease. (PO 126-1) M. Van Dyke, L. Maier, M. Mroz, L. Silveira, J. Martyny, National Jewish Health, Denver, CO; M. Ruttenber, Colorado Department of Public Health and Environment, Denver, CO; S. Reynolds, Colorado State University, Fort Collins, CO.

1:20 p.m.

Development of Job Exposure Matrices for the Pre-1974 Vinyl Chloride Industry. (PO 126-2) L. Dell, K. Mundt, ENVIRON International Corporation, Amherst, MA; C. Torres, ENVIRON International Corporation, Atlanta, GA; R. Adams, ENVIRON International Corporation, Princeton, NJ.

1:40 p.m.

Retrospective Exposure Assessment in the Specialty Chemical Research Facility. (PO 126-3) Y. Chen, G. Ramachandran, B. Alexander, J. Mandel, University of Minnesota, Minneapolis, MN.

2:00 p.m.

Exposure Reconstruction in Occupational Human Health Risk Assessment: Current Methods and a Recommended Framework. (PO 126-4) J. Sahmel, K. Devlin, ChemRisk, Inc., Boulder, CO; D. Paustenbach, D. Hollins, S. Gaffney, ChemRisk, Inc., San Francisco, CA.

2:20 p.m.

Long-Term Exposure to Occupational Dust and Major Causes of Death in Chinese Workers. (PO 126-5) W. Chen, Y. Liu, H. Wang, S. Weng, J. Chen, T. Wu, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China; E. Hnizdo, F. Hearl, NIOSH, Morgantown, WV; Y. Sun, F. Bochmann, Institute for Occupational Safety and Health of German Social Accident Insurance (IFA), Sankt Augustin, Germany; X. Zhang, Jingdezhen Health Bureau, Jingdezhen, China.

2:40 p.m.

Exposure-Response over Time and Lifetime Risk of Silicosis — Regulatory Risk Assessment of Silicosis Among a Cohort of Chinese Pottery Workers. (PO 126-6) F. Bochmann, Y. Sun, IFA-DGUV, Sankt Augustin, Germany; W. Chen, Huazhong University of Science and Technology, Wuhan, China.

3:00 p.m.

Cardiopulmonary Mortality and Long-Term Exposure to Occupational Dust: A Cohort Study. (PO 126-7) Y. Liu, W. Chen, Huazhong University of Science and Technology, Wuhan, China; K. Steenland, Emory University, Atlanta, GA.

3:20 p.m.

COPD in Construction Workers: Results from Two Medical Monitoring Programs. (PO 126-8) J. Dement, Duke University, Durham, NC; L. Welch, Center for Construction Research and Training (CPWR), Silver Spring, MD; K. Ringen, Stoneturn Consultants, Seattle, WA.

PO 127

New Issues in Biological and Chemical Sampling and Analysis

1:00 p.m.–4:00 p.m. + OCC, B119

Arranger and Moderator: A. Teague, Analytics Corporation, Ashland, VA. **Monitors:** S. VanEtten, EMSL Analytical, Cinnaminson, NJ; M. Eide, retired, Murray, UT.

1:00 p.m.

Concentration Factor as a Function of Particle Size and Sampling Flow Rate for the Virtual Impactor of the XMX/2L-MIL Biological Air Sampler. (PO 127-1) J. Black, U.S. Air Force, Wright-Patterson AFB, OH; C. Cooper, J. Slagley, School of Aerospace Medicine, Wright-Patterson AFB, OH.

1:20 p.m.

The Influence of Air Volume on Fungal Spore Viability: A Comparison of Four Bioaerosol Samplers. (PO 127-2) M. Saleh, University of Toronto, Toronto, ON, Canada.

1:40 p.m.

Validations of the Dynamic Air Sampling Method for Microbial Volatile Organic Compounds (MVOCs) by Solid-Phase Microextraction (SPME) with the Co-Exist of BTEX. (PO 127-3) I. Wang, Y. Chen, S. Tsai, National Taiwan University, Taipei, Taiwan.

2:00 p.m.

Field Evaluation of Diffusive Samplers for Indoor Air VOC Measurements. (PO 127-4) H. Hayes, Air Toxics Ltd., Folsom, CA.

2:20 p.m.

Passive Monitoring of Volatiles in the Workplace Using a Matrix Insensitive Diffusion Sampler. (PO 127-5) T. Robinson, D. Cardin, Entech Instruments, Inc., Simi Valley, CA.

3:00 p.m.

An Analytical Evaluation of Ontario Firefighters' Exposures to Volatile, Semivolatile and Particulate Organics During Fire Fighting by Air Sampling, Skin Sampling and Selected Urinary Metabolites. (PO 127-6) B. McCarry, S. Fernando, L. Shaw, D. Shaw, McMaster University, Hamilton, ON, Canada.

3:20 p.m.

Determination of Particle Size Distribution from Welding Rod Flux Handling. (PO 127-7) L. Burrelli, J. Spencer, Environmental Profiles, Inc., Columbia, MD.

3:20 p.m.

Development of a Consensus Standard for a Smaller Wipe for Beryllium in Settled Dust. (PO 127-8) M. Brisson, L. Youmans-McDonald, Savannah River Nuclear Solutions LLC, Aiken, SC; K. White, Consultive Services, Virginia Beach, VA; A. Agrawal, Berylliant, Inc., Tucson, AZ; K. Ashley, NIOSH, OH.

3:40 p.m.

Determination of Natural Beryllium in Soil and Swipe Samples Utilizing Yttrium/Beryllium Ratio. (PO 127-9) T. Gran, W. Word, National Security Technologies, LLC, Mercury, NV.

RT 239

10 Years Later: What Have We Learned from the WTC Attacks?

1:00 p.m.–4:00 p.m. + OCC, Oregon 202

Arranger: J. Springston, TRC Companies, Inc., New York, NY. **Moderator:** R. Adams, ENVIRON International Corporation, Princeton, NJ. **Monitors:** D. Kahane, Forensic Analytical, Hayward, CA; W. Baker, Michaels Engineering, La Crosse, MI.

This year marks the 10th anniversary of the terrorist attacks on the World Trade Center and the Pentagon. The industrial hygiene community was largely unprepared for the health and safety challenges that it would face following the collapse of the twin towers. These challenges included not only

monitoring the first responders but also extended into the process of reclaiming the surrounding buildings. Within days of the attacks, the EPA reported that the air was safe to breathe even though the characterization of the dust created by the collapses was still only in its preliminary stages. It was not until over a year later that an official document was put out by the World Trade Center Indoor Air Taskforce Working Group identifying “contaminants of potential concern” along with suggested clearance criteria. In the ensuing decade, much has been learned not only about the exposures that the responders faced but also about some of the ensuing health effects suffered by them. In addition, specialized training programs and monitoring devices have been developed by various entities for similar disaster scenarios.

+ **Community Exposures and Health Issues Related to the World Trade Center Disaster.**

L. Chen, New York University, Tuxedo, NY.

+ **Challenges Faced in Designing and Overseeing Remediation Efforts in Buildings Impacted by the World Trade Center Disaster.**

J. Springston, TRC Companies, Inc., New York, NY.

+ **Health Care Amidst the Rubble: The World Trade Center Medical Monitoring and Treatment Program.**

J. Moline, North Shore/LIJ Health System, Great Neck, NY.

+ **Managing the Fatigue of Disaster Workers: Lessons Applied from WTC.**

B. Lippy, The Lippy Group, LLC, Baltimore, MD.

+ **Establishing Health and Safety Programs for Non-Emergency Response Workers in a Building Directly Impacted by the Destruction of the World Trade Center.**

G. Baril, Lawrence Environmental Group LLC, New York, NY.

+ **Today's Best Available Air Monitoring Technology Would Have Made a Difference in the Ground Zero Recovery Operation.**

B. Groves, Emilcott Associates, Inc., Chatham, NJ.

RT 240

The NIOSH Personal Protective Technologies Program

1:00 p.m.–4:00 p.m. + OCC, F149

Arranger: Z. Zhuang, NIOSH, Pittsburgh, PA. **Monitors:** L. Janssen, Larry Janssen Consulting, LLC, Stillwater, MN. **Monitors:** J. Parker, L. Boord, NIOSH, Pittsburgh, PA.

Maintaining the health and safety of workers in the United States and globally is accomplished in part by reducing hazardous

exposures through the use of personal protective equipment (PPE). Personal protective technologies (PPT) are defined as the specialized clothing or equipment worn by individuals for protection against health and safety hazards, as well as the technical methods, processes, techniques, tools, and materials that support their development, evaluation, and use. PPT encompasses PPE products such as respirators, gloves, protective eyewear, hearing protection, and protective clothing but also includes facepieces, filters, guidance documents, standards, and test procedures. In the United States, federal responsibility for civilian worker PPT is integral to the mission of the National Institute for Occupational Safety and Health (NIOSH). Panelists at this roundtable will discuss how NIOSH's PPT Program fulfills its mission through three major areas of endeavor: (1) respirator certification as mandated in federal regulations; (2) research focused on protection from respiratory, dermal, and injury hazards; and (3) participation in standards setting and policy making. The overall objective is to provide practicing hygienists with an understanding of the NIOSH PPT program.

+ **Program's Relevance to and Impact on Occupational Health and Safety.**

M. D'Alessandro, NIOSH, Pittsburgh, PA.

+ **Respirator Certification and Standards Development.**

R. BerryAnn, NIOSH, Pittsburgh, PA.

+ **Research Portfolio for Respiratory Protection.**

R. Shaffer, NIOSH, Pittsburgh, PA.

+ **Research Focusing on Protective Clothing and Equipment.**

A. Shepherd, NIOSH, Pittsburgh, PA.

+ **NIOSH Personal Protection Technology: Injury Prevention Research.**

A. Amendola, NIOSH, Morgantown, WV.

+ **Hearing Loss Prevention Research.**

C. Kardous, NIOSH, Cincinnati, OH.

RT 241

OSHA's I2P2: Should I be Worried?

1:00 p.m.–4:00 p.m. + OCC, A106

Arranger: L. Sedlak, Stanley Black & Decker Corporation, Foothill Ranch, CA. **Moderator:** W. Lashbrook, DeVany Industrial Consultants, Vancouver, WA. **Monitors:** S. Eversmeyer, Port of Portland, Portland, OR; S. Fess, Xerox Corporation, Rochester, NY.

OSHA has recently announced plans to issue an injury and illness prevention program (I2P2). The requirement for mandatory health

+ Technical Program: Wednesday

and safety programs based on risk assessment is not new to the EHS professional doing business outside of the United States. In many countries around the world the requirement for mandatory health and safety programs has existed for several decades. This roundtable will discuss the key elements of the proposed rulemaking, offer insight to the use of an effective EHS-MS to meet compliance and discuss the implementation of such programs in the general and construction industries.

- + **OSHA's Injury and Illness Prevention Program (I2P2) Proposed Rule: A Deeper Dive.** B. Hammock, Jackson Lewis LLP, Reston, VA.
- + **How OSHA's I2P2 and an EHS-MS Are Aligned.** J. French, Stanley Black & Decker, Lake Forest, CA.
- + **Health & Safety Management Plans Around the World: Already a Requirement.** D. Downs, EHS Management Partners, LLC, Shorewood, MN.
- + **Establishing the Culture: Injury and Illness Prevention Programs in Construction.** G. Crawford Jr., CIH, Weston Solutions Inc., West Chester, PA.
- + **How to Make Injury and Illness Prevention Programs work in Construction: A Building Trades Union Perspective.** S. Schneider, Scott Schneider, Washington, DC.

RT 242

REACH is Here: How and Where its Impact Will Be Felt by IH Professionals

1:00 p.m.–5:00 p.m. + OCC, Oregon 201
Arranger and Moderator: C. Gherman, Honeywell, Phoenix, AZ. **Monitors:** M. Kolanz, Brush-Wellman, Inc., Cleveland, OH; S. Battista, 3M Company, St. Paul, MN.

The primary purpose of the European Union REACH (Registration, Evaluation, Authorisation of CHemicals) regulation is the protection of human health and the environment with an integral concept of the importance of communication up and down the supply chain during the exposure scenario and exposure assessments process. REACH has wide ranging impact in all stages of the product life cycle and throughout the supply chain. The registration deadline for the first round of REACH substances has come and gone. Measuring and controlling exposures are key aspects of industrial hygiene but different approaches are required depending on your role within the supply chain. This

roundtable discussion explores aspects of REACH that will have a noticeable impact on IH professionals, including the requirements for development and communication of exposure scenarios within the chemical supply chain, the concept of a Derived No Effect Level (DNEL) versus an OEL, how this process aligns with the AIHA Exposure Assessment Strategy, the interaction between GHS and REACH and the implementation of safe working advice by and to downstream users and the public.

- + **REACH Requirements and IH Impacts Across the Supply Chain.** P. Harper, ENVIRON International Corporation, Phoenix, AZ.
- + **Chemical Producers.** R. Skoglund, 3M Company, St. Paul, MN.
- + **DNELs and OELs: Exposure Limits Serving Different Purposes, What Is an IH to Do?** R. Roy, 3M Company, St. Paul, MN.
- + **Using the AIHA Exposure Assessment Strategy for REACH.** P. Logan, 3M Company, St. Paul, MN.
- + **The Path to a REACH Exposure Scenario: Downstream User Communication, Exposure Assessment, and Risk Management Measures.** J. Walton, 3M Company, St. Paul, MN.
- + **REACH and GHS — Implementing IH Controls.** D. Deeds, Industrial Health & Safety Consultants, Huntington, CT.
- + **Article Producer Communications.** K. Murphy, Honeywell, Tempe, AZ.

Emerging Issues Forum 1

Specializing: Keeping Yourself Relevant in the Changing Market

1:30 p.m.–3:30 p.m. + OCC, A108
The AIHA Registry Programs, LLC, is working with several of AIHA's volunteer groups to develop registry programs that will provide additional credentials for professionals at all levels in specific areas of OEHS practice expertise. This session will be an open forum for discussion after brief presentations that will provide an overview of the developing programs and the benefits to the participants in the areas of Exposure Assessment Strategies, Green Building, Real-Time Detection, Sampling and Laboratory Analysis, Stewardship and Sustainability, and Value Strategy.

CR 319

Slip Simulator Training: Slip-Trip-Fall Prevention

2:30 p.m.–3:30 p.m. + OCC, D139

Presenter: J. Longo, Diageo, Norwalk, CT.
Moderator: S. Eversmeyer, Port of Portland, Portland, OR.

Preventing slips-trips-falls (STFs) requires addressing the physical environment, footwear and individuals. Addressing individuals — their awareness level and physical ability both to avoid STFs and recover from a slip-trip event — is perhaps the most challenging of all. STF training is not an exciting topic — it's a sleeper. Learn about how a manufacturer with plants throughout North America deployed the first known portable slip simulator. Is using a slip simulator the most engaging and effective STF training device available?

CR 320

EHS, Lean and Six Sigma

5:00 p.m.–6:00 p.m. + OCC, B113

Presenters: G. Popov, University of Central Missouri, Warrensburg, MO; J. Ganschow, Caterpillar Inc., Mossville, IL. **Monitor:** J. Zey, University of Central Missouri, Warrensburg, MO.

Lean and Six Sigma are two improvement systems that are being deployed across multiple manufacturing and service sectors. This crossover program is designed to introduce EHS professionals to various Lean and Six Sigma tools applicable to environmental management programs. The presenters will describe how Lean and Six Sigma relate to the environment and provide guidance and tools on how EHS professionals can connect with Lean and Six Sigma activities to generate better environmental and operational results.

CR 321

The Aging Workforce: Occupational Safety, Health, Hygiene and Wellness Considerations

5:00 p.m.–6:00 p.m. + OCC, C126

Presenter: H. Sandler, Sandler Occupational Medicine Associates, Inc., Melville, NY.
Moderator: G. Houvener, OSHA, Washington, DC.

An increasing aging work force poses a different set of concerns and risk in maintaining workplace safety, health, wellness,

productivity and regulatory compliance. Session attendees will be able to identify potential fitness for duty issues, common disease and health risk factors. Attendees will gain knowledge regarding the complex relationships between various regulations from OSHA to FMLA. Participants will learn investigative and decision making approaches for updating occupational safety and health programs and costs potentially posed by an aging work force.

PO 128

Risk Assessment Methods and Applications

5:00 p.m.–7:00 p.m. + OCC, B110

Arrangers: P. Williams, E Risk Sciences, LLP, Boulder, CO; A. Rossner, Clarkson University, Potsdam, NY. **Moderator:** C. Fehrenbacher, US EPA, Washington, DC. **Monitors:** K. Yost, Coimm Scope, Inc., Claremont, NC; K. Beckner, Occidental Chemical Corporation.

5:00 p.m.

Validation of Control Banding: Performance of the COSHH Essentials Model at a Small and a Medium-Sized Plant. (PO 128-1) E. Lee, J. Slaven, M. Harper, NIOSH, Morgantown, WV; R. Bowen, Bowen EHS, Inc., Chapel Hill, NC.

5:20 p.m.

Dermal Absorption of Benzene in Occupational Settings: Estimating Uptake and Applications for Risk Assessment. (PO 128-2) P. Williams, E Risk Sciences, LLP, Boulder, CO; J. Sahmel, ChemRisk, Boulder, CO; J. Knutsen, Colorado School of Mines, Golden, CO; J. Spencer, Environmental Profiles, Inc., Columbia, MD.

5:40 p.m.

A Combined Monte Carlo/USEPA Integrated Exposure Uptake Biokinetic Model (IEUBK) Approach for Evaluating Remedial Action Scenarios for an Active Smelter Area in Shymkent, Kazakhstan. (PO 128-3) A. Korchevskiy, J. Rasmuson, E. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; R. Olsen, CDM, Inc., Denver, CO.

6:00 p.m.

WITHDRAWN Reassessment of Inorganic Arsenic Risk Analysis with Consideration of Substantial Effect Variables. (PO 128-4) S. Lamm, S. Robbins, Consultants, Washington, DC; R. Chen, Georgetown University, Washington, DC; J. Lu, American University, Washington, DC.

6:20 p.m.

Metalworking Fluid Risks — Identified by Research Growing Out of a Union Campaign. (PO 128-5) F. Mirer, City University of New York, New York, NY.

6:40 p.m.

Analysis of Human Health Risk Throughout the Life Cycle of a Gallium Arsenide Thin Film Photovoltaic Cell. (PO 128-6) W. Cyr, ChemRisk, San Francisco, CA; K. Krause, A. McIntyre, EORM, San Jose, CA.

PO 129

Nanotechnology: Assessment and Control

5:00 p.m.–7:00 p.m. + OCC, B119

Arranger and Moderator: M. Rosenow, Argonne National Lab, Argonne, IL. **Monitors:** R. Goldman, 3M Company, St. Paul, MN; L. Poore, University of Kentucky, Lexington, KY.

5:00 p.m.

Comparison of Instrument Response when Measuring Different Types of Nanomaterials in Occupational Settings Using Scanning Mobility Particle Sizer, Surface Area Monitors, and Condensation Particle Counter. (PO 129-1) S. Ham, E. Lee, K. Lee, C. Yoon, Seoul National University, Seoul, Republic of Korea; D. Park, Korea National Open University, Seoul, Republic of Korea; K. Ha, Changwon National University, Changwon, Republic of Korea; E. Jung, Korea Occupational Safety and Health Agency, Incheon, Republic of Korea.

5:20 p.m.

Applying Control Technology to Airborne Nanoparticles: Evaluation of Filtration Performance for Engineered Nanoparticles. (PO 129-2) S. Tsai, C. Huang, M. Ellenbecker, University of Massachusetts Lowell, Lowell, MA; M. Echevarria-Vega, University of Puerto Rico, Mayagüez, Mayagüez, PR; G. Sotiriou, Particle Technology Laboratory, Zurich, Switzerland; P. Demokritou, Harvard University, Boston, MA.

5:40 p.m.

The Optimum Approach to Control Nanoparticle Exposure Using Local Exhaust Ventilation. (PO 129-3) S. Tsai, C. Huang, M. Ellenbecker, University of Massachusetts Lowell, Lowell, MA; K. Dunn, NIOSH Cincinnati, OH.

6:00 p.m.

Use of Zero-Background Techniques to Improve Sensitivity and Specificity when Measuring Airborne Exposure to Engineered Nanoparticles. (PO 129-4) H. Papinchak, University of California, Berkeley, Berkeley, CA; R. Kelly, LBNL, Berkeley, CA.

6:20 p.m.

Evaluation of the Potential Release of Unbound Engineered Nanoparticles at Laboratory Research Facility. (PO 129-5) K. Rickabaugh, G. Casuccio, K. Bunker, R. Ogle, RJ Lee Group, Monroeville, PA.

6:40 p.m.

Exposure Assessment for Carbon Nanotubes. (PO 129-6) J. Baker, ICU-A Total Safety Company, The Woodlands, TX.

RT 243

Effective Adult SH&E Training Techniques: Some Tips and Lessons Learned

5:00 p.m.–7:30 p.m. + OCC, B116

Arranger: J. Jarrell, University of Cincinnati, Cincinnati, OH. **Moderator:** B. Rathbun, US Army, Aberdeen Proving Ground, MD. **Monitors:** O. Zahn, Military, Lancaster, CA; M. Wan, EOH Consulting, St. Petersburg, FL.

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, so conference participants need not worry about repeated presentations. IHs are often called upon 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: dealing with different learning styles; training methods for young workers; using video-based objects to enhance training; using social networking tools for training; and evaluating the effectiveness of your training's "learning transfer."

+ **Dealing with Differing Learning Styles.**

J. Jarrell, University of Cincinnati, Cincinnati, OH.

+ Technical Program: Wednesday

- + **Training Methods for Young Workers.** M. Faure, Georgia Institute of Technology, Atlanta, GA.
- + **Enhancing Training with Video-Based Learning Objects.** T. Ouimet, Yale University, Plantsville, CT.
- + **Using Social Networking Tools in Safety and Health Training.** E. Maples, University of Alabama, Birmingham, AL.
- + **Are They Really Getting It? Now That the Training is Over, Will It Be Effective?** J. Dimos, Consultant, Oak Park, IL.

RT 244

Hazardous Drugs in Health Care — State of the Science and Emerging Issues

5:00 p.m.–7:30 p.m. + OCC, C121

Arranger: N. Rice, Intermountain Healthcare, Salt Lake City, UT. **Monitors:** C. Kulakowski, ARUP Laboratories, Salt Lake City, UT. **Monitors:** G. Byrns, Illinois State University, Normal, IL; M. Jones, Department of Veterans Affairs, Iowa City, IA.

Over 5.5 million workers are potentially exposed to hazardous drugs. The number of workers and environments where hazardous drugs are used is expanding as new drugs are developed and as hazardous drugs are increasingly being used for non-oncology purposes. Workers potentially exposed range from pharmacists, nurses, and physicians to receiving and housekeeping personnel. Although many hazardous drug safe handling practices were advanced in the 1980s and 1990s, studies continue to show worker exposure despite improvements in safety procedures. This session will provide an overview of the science and current recommendations for controlling worker exposure to hazardous drugs. Unique industrial hygiene challenges will also be explored in the context of the increasing use of novel hazardous drug procedures in the operating room, hazardous drug administration via aerosol, and challenges with hazardous drug spill cleanup. This information-packed session with review up to date information that the industrial hygienist can use to develop a plan to protect workers from exposure to hazardous drugs.

- + **40 Years of Occupational Exposure to Hazardous Drugs: Where Are We and What Have We Learned?** T. Connor, NIOSH, Cincinnati, OH.
- + **Hazardous Drugs in the Operating Room — Occupational Hygiene Challenges.** N. Rice, Intermountain Healthcare, Salt Lake City, UT.
- + **Aerosolized Hazardous Drugs — Controlling Ribavirin and Pentamidine.** S. Derman, MediSHARE Environmental Health & Safety Services, Cupertino, CA.
- + **Improving Hazardous Drug Spill Response.** M. McCullough, Dana-Farber Cancer Institute, Boston, MA.
- + **Development of a Hazardous Drug Health and Safety Plan.** B. Connors, Environmental Health & Engineering, Needham, MA.



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+ At-a-Glance: Thursday

Thursday, May 19

7:00 a.m.-4:30 p.m.

Speaker Ready Room
OCC, C124

7:30 a.m.-10:30 a.m.

Registration and Hotel Reservations
OCC, Lobby A

8:00 a.m.-9:00 a.m.

CR 322 Effective Operational EHS Metrics Reviews: Rhythms, Processes and Driving Results
OCC, D139

8:00 a.m.-10:00 a.m.

Emerging Issues Forum 2: Personal Protective Technology Standards and Conformity Assessment
OCC, F149

8:00 a.m.-10:20 a.m.

PO 130 Indoor Environmental Quality II
OCC, D136

8:00 a.m.-10:30 a.m.

RT 245 Health Hazard and Control Banding in the U.S. at a Crossroads: A Panel Discussion
OCC, B110

RT 246 Sampling Strategies in Unusual IH Exposures

OCC, B119

8:00 a.m.-11:00 a.m.

RT 247 Emerging Issues with Bioaerosols in the Pacific Northwest
OCC, C121

RT 251 Welding Health Effects, Exposures, and Exposure Reduction Controls

OCC, B113

8:00 a.m.-11:20 a.m.

PO 131 Community Environmental Health
OCC, A108

8:00 a.m.-11:30 a.m.

RT 248 Environmental Biohazard Control of Multidrug-Resistant Organisms
OCC, B116

RT 249 NIOSH Response to the Deepwater Horizon Oil Spill

OCC, A106

8:00 a.m.-Noon

RT 250 Prevention through Design: Construction and Noise
OCC, F152

8:00 a.m.-12:20 p.m.

PO 132 Aerosols
OCC, D138

9:30 a.m.-10:30 a.m.

CR 323 Toxic Substances Control Act: Not Just Asbestos
OCC, D139

12:30 p.m.-1:30 p.m.

Stokinger Award Lecture
OCC, B110

1:00 p.m.-2:00 p.m.

CR 324 Accountability and Discipline in Safety: A Complementary Approach
OCC, B119

1:00 p.m.-3:00 p.m.

PO 133 Biosafety and Environmental Microbiology II: Current Topics in Bioaerosols and Agricultural Health and Safety
OCC, C126

1:00 p.m.-3:20 p.m.

PO 134 Ergonomics: Upper Extremity Considerations and Methodological Approaches
OCC, A108

1:00 p.m.-3:30 p.m.

RT 252 Field-Portable and Mobile Analysis and Testing: Developing and Documenting Competencies
OCC, C121

RT 253 Leveraging ES&H Practice with the Latest Technology
OCC, B113

1:00 p.m.-4:00 p.m.

RT 254 The GHS Is Coming—Will You Be Ready?
OCC, A106

RT 255 Notable Confined Spaces

OCC, F149

1:00 p.m.-4:30 p.m.

RT 256 Respiratory Protection in Health Care: Changing Standards and Best Practices
OCC, F152

RT 257 Diacetyl and Diacetyl Substitutes - Where Are We Now?

OCC, B116

2:30 p.m.-3:30 p.m.

CR 325 How to Develop and Sustain an Effective Accident Investigation Program
OCC, B119

Note Meeting Rooms . . .

OCC = Oregon Convention Center

AIHA®

8:00 a.m.-10:00 a.m.

Student and Early Career Professionals Committee Meeting
OCC, E141

Volunteer Group Chairs Meeting
OCC, E145

8:00 a.m.-5:00 p.m.

ANSI/AIHA Z10 Occupational Health and Safety Management Systems Standard Meeting

Hilton, Salon, Executive Tower

WEEL Committee Meeting

Hilton, Directors Suite

8:30 a.m.-10:30 a.m.

AIHA Annual Business Meeting
OCC, C126

10:00 a.m.-Noon

Local Sections Officers Training
OCC, E146

Volunteer Group Secretaries Orientation Meeting

OCC, E145

11:30 a.m.-4:30 p.m.

AIHA Board of Directors Meeting
The Nines, Design

Ancillary

7:30 p.m.-5:00 p.m.

General Electric IH Task Force Meeting (by invitation only)
GE Healthcare, Hillsboro, OR

Friday, May 20

AIHA®

8:00 a.m.-Noon

ANSI/AIHA Z10 Occupational Health and Safety Management Systems Standard Meeting

Hilton, Broadway II

+ Technical Program: Thursday

CR 322

Effective Operational EHS Metrics Reviews: Rhythms, Processes and Driving Results

8:00 a.m.–9:00 a.m. + OCC, D139

Presenter: C. Johnson, General Electric, Billerica, MA. **Moderator:** S. Weeks, Hargrove Engineers + Constructors, Mobile, AL. **Monitor:** D. Mitchem, West Virginia University, Morgantown, WV.

An effective EHS metrics review process is critical to success in any organization. Come see how a comprehensive EHS scorecard was used to drive improvement and consistent execution across 15+ sites in a \$1B+ operating business within General Electric. Discussion will focus on the scorecard itself, adjustments made over a 3-year period, picking the right frequency/audience for the review, and the role of operational leaders and functional EHS leaders in ensuring robust dialogue.

Emerging Issues Forum 2 Personal Protective Technology Standards and Conformity Assessment

8:00 a.m.–10:00 a.m. + OCC, F149

Arranger and Moderator: M. D'Alessandro, NIOSH, Pittsburgh, PA. **Monitor:** R. Berry Ann, NIOSH, Pittsburgh, PA.

When users purchase personal protective equipment (PPE), they expect it to protect them in the conditions they will use it. The level of protection required by a type of PPE can vary greatly among occupations and work tasks. Conformity assessment of PPE to appropriate product performance standards can provide needed confidence for PPE users.

It is important to coordinate the numerous personal protective technology (PPT) standards to allow for rapid updating that keeps pace with the development of technology and emerging hazards. The process should take advantage of the benefits offered by each current standard and take into account PPE interface and interoperability issues. Conformity assessment systems can be an essential part of an effective standards system for PPE. The standards development process, appropriate conformity assessment, information on the performance of PPE in the workplace and emerging PPE technologies are all critical elements of a robust approach to advancing PPE-related worker safety.

This emerging issues session will discuss how standards and conformity assessment approaches impact proper PPE use. Some questions we want to discuss during this session include:

- + What is conformity assessment?
- + How can a risk-based approach to conformity assessment system design be applied to PPT?
- + How do standards and conformity assessment impact the selection and use of PPE?
- + How important are PPE standards to PPE achieving the expected level of protection through proper use, maintenance and training?
- + How can standards coordination be achieved for various types of PPE and PPE systems (i.e., ensembles)?
- + Under what circumstances is first-party conformity assessment appropriate?
- + What mechanisms must be developed or enhanced for federal agencies having authorities in this area to achieve proper coordination?
- + How is the PPE user community involved to drive market support for PPE conformity with performance standards?

Speakers will provide presentations and participate in a panel question and answer session to address the questions identified above: Gordon Gillerman, National Institute of Standards and Technology (NIST), Gaithersburg, MD; John Steelnack, OSHA, Washington, DC; Angie Shepherd, Jon Szalajda, NIOSH, Pittsburgh, PA; Cristine Fargo, International Safety Equipment Association (ISEA), Arlington, VA; James Platner, Center for Construction Research and Training, Silver Spring, MD; Jose Rodriguez, Raytheon Corporation, Dulles, VA.

PO 130

Indoor Environmental Quality II

8:00 a.m.–10:20 a.m. + OCC, D136

Arranger: J. Hicks, Exponent, Inc., Oakland, CA. **Moderator:** M. Cooper, Novellus Systems, Inc., San Jose, CA. **Monitors:** L. Albin, Purdue University, West Lafayette, IN; D. Dahlstrom, ENVIRON International Corp., Atlanta, GA.

8:00 a.m.

Case Studies Using Particle Identification for Forensic Indoor Environmental Quality Investigations. (PO 130-1) M. Andrew, Sumerra, Hong Kong.

8:20 a.m.

Secondhand Tobacco Smoke Exposure in Baton Rouge, Louisiana, Bars and Casinos. (PO 130-2) D. Harrington, New Orleans, LA; J. Klink, Louisiana Public Health Institute, New Orleans, LA.

8:40 a.m.

Evaluating a Residence Following a Smoke Event and the Subsequent Cleanup. (PO 130-3) S. Evans, MDE Inc., Seattle, WA.

9:00 a.m.

Soot and Carbon Monoxide Source Investigation at a New York City Apartment Building. (PO 130-4) M. Gillie, J. Gee, GeoTrans, Inc., King of Prussia, PA.

9:20 a.m.

Evaluation and Control of Elevated Naphthalene Levels in Residential Indoor Air Emanating from Creosote-Soaked Timber. (PO 130-5) P. Beach, Harris & Lee Environmental Sciences, LLC, San Francisco, CA.

9:40 a.m.

IAQ Guidelines for Occupied Buildings Under Construction. (PO 130-6) K. Grist, SMACNA, Kansas City, MO.

10:00 a.m.

Ethanol from Reed Diffusers and Hand Sanitizers: Why Should I Care? (PO 130-7) M. Spartz, Prism Analytical Technologies, Inc., Mt. Pleasant, MI.

RT 245

Health Hazard and Control Banding in the U.S. at a Crossroads: A Panel Discussion

8:00 a.m.–10:30 a.m. + OCC, B110

Arranger and Moderator: B. Altemose, SABRE Health & Safety LLC, Easton, PA. **Monitors:** A. Bracker, Connecticut Department of Labor: CONN-OSHA, Wethersfield, CT; A. Kref, The Dow Chemical Company, Croydon, PA.

Through a panel discussion and debate of past, present, and future applications of control banding in the United States, this session will discuss whether health hazard and control banding are here to stay in this country and what it means for the future of industrial hygiene.

- + **Control Banding — Active and Passive Principles.** J. Farris, SafeBridg Consultants, Inc., Mountain View, CA.
- + **Health Hazard Banding to Supplement Occupational Exposure Levels.** D. Heidel, NIOSH, Cincinnati, OH.

+ Technical Program: Thursday

- + **A Globally Harmonized System for Health Hazard Banding.** S. Ripple, The Dow Chemical Company, Midland, MI.
- + **A Control Banding Tool for Managing Infectious Diseases.** D. Nelson, Environmental Protection Agency, Boulder, CO.

RT 246

Sampling Strategies in Unusual IH Exposures

8:00 a.m.–10:30 a.m. + OCC, B119

Arranger: M. Eide, Retired, Murray, UT. **Moderator:** P. Kostle, State Hygienic Laboratory, Iowa City, IA. **Monitors:** S. Moore, Consultant, Oconomowoc, WI; S. Iske, University of Central Missouri, Warrensburg, MO.

Unique sampling strategies are used when investigating an odor, an unknown chemical exposure, vapor intrusion, emergency response, or indoor air quality monitoring. When encountering unique or nonstandard exposures the standard exposure assessment strategies need to be modified or new strategies need to be used. A variety of sampling media can be used by the industrial hygienist to determine exposures in these nonstandard industrial hygiene situations. The industrial hygienist is encouraged to involve their AIHA®-accredited laboratory, as they can provide valuable information and resources in determining the exposures.

- + **LEED Testing for IAQ Monitoring.** E. Stuber, Galson Laboratories, East Syracuse, NY.
- + **Odor Investigations: A Primer.** S. Van Etten, EMSL Analytical, Inc., Cinnaminson, NJ.
- + **Whole-Air Canister Sampling for Characterizing Unknowns.** I. DeGraff, Restek Corporation, Bellefonte, PA.
- + **Diffusive Sampling in an IAQ Context.** C. Manning, Assay Technology, Livermore, CA.

RT 247

Emerging Issues with Bioaerosols in the Pacific Northwest

8:00 a.m.–11:00 a.m. + OCC, C121

Arranger: G. Clark, WorkSafeBC, Vancouver, BC, Canada. **Moderator:** E. Alvernaz, WorkSafeBC, Vancouver, BC, Canada. **Monitors:** P. Dulaney, Applied Environmental, Inc., Cary, NC; D. Hurley, CertainTeed Corp., Roaring River, NC.

The Pacific Northwest has one of the wettest climates in North America, with an average

annual rainfall of over 1 meter (39 inches) in Vancouver alone. This moisture creates an ideal growth environment for microorganisms and causes other potential problems for buildings and workplaces. The past two decades have seen serious damage to residential condominiums from wood rot, and some of the major and developing industries (e.g., forestry and composting) have significant issues with worker exposures to bioaerosols. There is also evidence of an emerging fungal pathogen (*Cryptococcus gattii*) in our forests. This session will examine some of these issues and the methods and approaches that researchers and industrial hygienists in the Pacific Northwest are utilizing to deal with them.

- + **Cryptococcus Gattii in the Pacific Northwest — A Tale of Emergence and Public Health Response.** K. Bartlett, University of British Columbia, Vancouver, BC, Canada.
- + **Bioaerosols Associated with Composting: Results of Area Sampling from a Commercial Facility in Southwestern British Columbia, Canada.** J. Blair, Pacific Environmental Consulting & Occupational Hygiene Services, North Vancouver, BC, Canada.
- + **Microbial Issues Arising from New Construction in the Pacific Northwest: How Things Go Wrong and How to Fix Them.** M. Smith, AMEC, Bothell, WA.
- + **Fungal Growth in Buildings: The Differences Between Wood Rot Fungi and Surface Moulds.** J. Dobranic, EMSL Analytical, Inc., Cinnaminson, NJ.
- + **Dry Ice Blasting and Mold Remediation in British Columbia.** N. McManus, NorthWest Occupational Health & Safety, North Vancouver, BC, Canada.
- + **Regulating Bioaerosols: Can Occupational Health and Safety Regulations Be Applied to Bioaerosols?** The British Columbia experience. G. Clark, WorkSafeBC, Vancouver, BC, Canada.

RT 251

Welding Health Effects, Exposures, and Exposure Reduction Controls

8:00 a.m.–11:00 a.m. + OCC, B113

Arranger and Moderator: A. Siert, Xcel Energy, Denver, CO. **Monitors:** G. Weiby, Xcel Energy, Minneapolis, MN; F. Anderson, Zachry Construction Corporation, San Antonio, TX.

Welding is among the most important and most 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. Efforts to create shared exposure databases are under way, yet previous efforts are of very limited value due to quality and comparability problems. Due to disparate findings of previous epidemiology studies, health effects have remained equivocal and controversial. Hexavalent chromium and manganese exposures are of interest, and recent studies indicate that other metals may be important as well. The OSHA Hexavalent Chromium Standard now requires engineering controls to reduce exposures where feasible, and ACGIH has placed manganese on the List of Intended Changes to reduce the TLV tenfold. Application of exposure reduction controls such as local exhaust ventilation and process change is complicated by technical feasibility limitations in many cases. However, significant recent advancements are being made in these areas and results will be presented by leading researchers.

- + **Health Effects of Welding.** J. Antonini, NIOSH, Morgantown, WV.
- + **Welding Process Selection — Why They Do the Things They Do.** M. Harris, Hamlin & Harris, Baton Rouge, LA.
- + **Welding Exposure Assessment Database Design and Variables of Importance for the Industrial Hygienist.** S. Woods, Xcel Energy, Denver, CO.
- + **Optimization of Local Exhaust Ventilation for Welding Fume Control.** J. Hicks, Exponent, Oakland, CA.
- + **Stainless Steel Welding Fume Composition and Chemical Species by Process Type from NIOSH Fume Generation Studies.** M. Keane, NIOSH, Morgantown, WV.
- + **Evaluation of Welding Exposure Determinants Based on Controlled Comparisons and Field Data.** A. Siert, Xcel Energy, Denver, CO.

PO 131

Community Environmental Health

8:00 a.m.–11:20 a.m. + OCC, A108

Arrangers: D. Mokadam, Association of Flight Attendants, Washington, DC; W. Cameron, Seattle, WA. **Moderator:** M. Vela Acosta, The Kresge Foundation, Troy, MI. **Monitors:** M. DeVany, DeVany Industrial Consultants, Vancouver, WA; D. Hornung, OSHA, Oakland, CA.

8:00 a.m.

Efficacy of “Green” Cleaning Products for Reducing Microbial Loads on Household Surfaces. (PO 131-1) M. Shum, D. Fong, National Collaborating Centre for Environmental Health, Vancouver, BC,

Canada; C. Gaulin, Centre de santé Publique de Québec, Québec, QC, Canada; M. Lê, University of Saskatchewan, Saskatoon, SK, Canada.

8:20 a.m.

Firefighter Exposure to Smoke. (PO 131-2) T. Fabian, J. Borgerson, P. Gandhi, Underwriters Laboratories, Northbrook, IL; C. Baxter, C. Ross, J. Lockey, University of Cincinnati, Cincinnati, OH; J. Dalton, Chicago Fire Department, Chicago, IL.

8:40 a.m.

A Comprehensive Noise Characterization in a High School. (PO 131-3) F. Akbar-Khanzadeh, C. Brown, S. Milz, University of Toledo, Toledo, OH.

9:00 a.m.

Wood Dust Exposure Among Community Service Volunteers. (PO 131-4) W. Ewing, E. Ewing, Compass Environmental, Inc., Kennesaw, GA; W. Ewing, The Lovett School, Atlanta, GA.

9:20 a.m.

Artificial Turf Crumb Rubber Field Investigation in Connecticut. (PO 131-5) N. Simcox, University of Connecticut, Farmington, CT; A. Bracker, Connecticut Department of Labor: CONN-OSHA, Weathersfield, CT; G. Ginsberg, B. Toal, Connecticut Department of Public Health, Hartford, CT; B. Golembiewski, Connecticut Department of Environmental Protection, Hartford, CT; C. Hedman, Wisconsin State Lab of Hygiene, Madison, WI.

9:40 a.m.

Case Study in Reducing Pesticide and Cockroach Infestation at a Public Housing Complex. (PO 131-6) K. Cohn, City and County of San Francisco, San Francisco, CA.

10:00 a.m.

Targeted Program in Lead Poisoning for St. Louis, Missouri: A Pilot Model to Predict Risk of Lead Exposure in Housing with Cost of Remediation. (PO 131-7) K. Ong, B. Emo, R. Lewis, K. Gillespie, M. Bloomfield, M. Elliot, Saint Louis University, St. Louis, MO.

10:20 a.m.

Nontraditional Land Uses and Emergency Planning: Challenges Associated with Developing Plans to Mitigate Impacts from Potential Toxic Gas Releases. (PO 131-8) P. Harper, ENVIRON International Corporation, Phoenix, AZ; D. Daugherty, ENVIRON International Corporation, Emeryville, CA; M. Posson, Exponent, Oakland, CA.

10:40 a.m.

Managing Odor Concerns in a Petrochemical Complex. (PO 131-9) N. Mydin, Petronas, Kuala Lumpur, Malaysia.

11:00 a.m.

Exposure Monitoring During the Deepwater Horizon Response. (PO 131-10) F. Tremmel, BP, Naperville, IL; M. Chau, C. Metzler, K. Murray-del Aguila, BP, Houston, TX; J. Dobbie, BP, Sunbury, United Kingdom; D. Dutton, DRD Toxicology Services Inc., Lisle, IL; H. Hewett, Exposure Assessment Solutions, Inc., Morgantown, WV; K. O'Shea, BP, Whiting, IN.

RT 248

Environmental Biohazard Control of Multidrug Resistant Organisms

8:00 a.m.–11:30 a.m. + OCC, B116

Arranger: G. Byrns, Illinois State University, Normal, IL. **Moderator:** J. Koerner, OSHA, Washington, DC. **Monitors:** J. Rice, Intermountain Healthcare, Salt Lake City, UT; M. Jones, VA Iowa City Health Care System, Iowa City, IA.

Modern hospitals are struggling to control dangerous, multidrug-resistant organisms such as methicillin resistant *Staphylococcus aureus* (MRSA), *Clostridium difficile* and others. Once rare, these highly pathogenic organisms are being identified in increasing frequency. The purpose of this session is to discuss the merits of a variety of environmental approaches to the control of these organisms. The session will describe the major organisms of concern, provide an overview of cleaning and disinfecting methods, and describe some unique infection control strategies such as the use of ultraviolet radiation and chemical fumigation. The session will also describe the role of personal protective equipment in infection control and discuss the uses and limitations of "green" or sustainable products in cleaning and disinfection. Finally, important design and construction issues in the control of infections will be discussed.

- + **An Overview of Multidrug-Resistant Organisms.** M. Patrick, MultiCare Health System, Tacoma, WA.
- + **Cleaning and Disinfection: An Overview of Current and Proposed Practices.** R. Strode, Chemistry & Industrial Hygiene, Inc., Wheatridge, CO.
- + **The Role of Green or Sustainable Products in Cleaning and Disinfection.** E. Stewart, Kaiser Permanente, Oakland, CA.

- + **The Risks and Benefits of Using Germicidal UV.** S. Miller, University of Colorado, Boulder, CO.
- + **The Risks and Benefits of Chemical Fumigation in Room Decontamination.** G. Byrns, Illinois State University, Normal, IL.
- + **Shortcomings in Health Care Personal Protective Equipment.** T. Fuller, Illinois State University, Normal, IL.
- + **The Importance of Facility Design and Construction in Infection Control.** L. Lee, Pacific Industrial Hygiene LLC, Kirkland, WA.

RT 249

NIOSH Response to the Deepwater Horizon Oil Spill

8:00 a.m.–11:30 a.m. + OCC, A106

Arranger and Moderator: T. Seitz, NIOSH, Cincinnati, OH. **Monitors:** S. Ahrenholz, S. Brueck, NIOSH, Cincinnati, OH.

This roundtable will discuss NIOSH activities related to the Deepwater Horizon oil spill. Initial efforts focused on the development of a voluntary roster of over 50,000 response workers to document who was responding and enable their follow-up after the response had ended. Early in the response, BP requested assistance from NIOSH's Health Hazard Evaluation Program, initially focusing on off-shore responders conducting booming and skimming operations, and later covering a much wider variety of response tasks including dispersant spraying, in situ burning of surface oil, source control, wildlife cleanup, onshore cleanup, waste management, and equipment/vessel decontamination. Speakers will address potential health and safety hazards encountered during the on-site exposure characterizations, health surveys, and observational studies and will present findings and recommendations. The many logistical challenges encountered during these evaluations will also be described. NIOSH efforts to summarize injury and illness data collected by BP will also be discussed along with notable injury and illness trends.

- + **Development of a Voluntary Roster for Over 50,000 Response Workers.** L. Delaney, NIOSH, Atlanta, GA.
- + **Occupational Exposure Evaluation During Small-Scale, Vessel-Based Dispersant Releases.** B. King, NIOSH, Cincinnati, OH.
- + **Evaluation of Airborne Exposures and Health Symptoms During In Situ Burning of Oil.** C. Dowell, NIOSH, Cincinnati, OH.

+ Technical Program: Thursday

- + **Health Surveillance During the Deepwater Horizon Response: The NIOSH Injury and Illness Report.** L. Delaney, NIOSH, Atlanta, GA.
- + **MC252 — Industrial Hygiene Assessment at the Source.** D. Sylvain, NIOSH, South Dartmouth, MA.
- + **On-Shore Observational Evaluations.** B. Curwin, NIOSH, Cincinnati, OH.
- + **Evaluation of Exposures During Oil Skimming and Booming and On-shore Decontamination Activities.** S. Durgam, NIOSH, Cincinnati, OH.

RT 250

Prevention through Design: Construction and Noise

8:00 a.m.–Noon + OCC, F152

Arrangers: S. Maberti, ExxonMobil, Houston, TX; C. Dellacqua, Amgen, Thousand Oaks, CA. **Moderator:** C. Dellacqua, Amgen, Thousand Oaks, CA. **Monitors:** R. Suga, Bechtel Jacobs, Oak Ridge, TN; A. Plaza, NASA, Houston, TX.

Prevention through design is a concept widely used in industry. The purpose of Prevention through Design is to identify potential health hazards inherent in the design, and recommend effective engineering controls. This session will give an overview of the Prevention through Design process and will present examples of design requirements from industry and the work done in collaboration with equipment manufacturers to meet design expectations. Case studies demonstrating the implementation of engineering controls in various industries will also be presented.

- + **Applying PtD to Design — Build — Start-Up.** D. Heidel, NIOSH, Washington, DC.
- + **Prevention through Design Concepts and Practice.** J. Gambatese, Oregon State University, Corvallis, OR.
- + **Prevention through Design — What it Is, How Does it Work, and Review of Best Practices.** J. Borowski, Black & Veatch, Kansas City, MO.
- + **Prevention through Design — Examples in the Water and Wastewater Industries.** C. Jones, San Francisco Public Utilities Commission, San Francisco, CA.
- + **EHS by deHSIgn at Amgen.** D. Bender, Amgen, Thousand Oaks, CA.
- + **Satisfying Your Noise Criteria — A Case History of One Company's Collaborative Effort with Equipment Manufacturers.** D. Driscoll, Associates in Acoustics, Evergreen, CO.
- + **Reducing Noise through Industrial Hygiene Design.** R. Powell, ExxonMobil, Baytown, TX.

- + **Community Noise Control Program for a Petroleum Refinery.** P. Owens, Shell, Hanford, CA.
- + **Noise Assessments and Hearing Loss Assessments Conducted at Four Animal Shelters.** C. Achutan, University of Nebraska, Omaha, NE.

PO 132

Aerosols

8:00 a.m.–12:20 p.m. + OCC, D138

Arranger and Moderator: S. Paik, Lawrence Livermore National Laboratory, Livermore, CA. **Monitors:** E. Reed, Liberty Mutual Insurance Co., Englewood, CO; S. Kim, University of Minnesota, Minneapolis, MN.

8:20 a.m.

Use of Handheld Particle Counters to Determine Nanoparticle Concentrations. (PO 132-1) P. O'Shaughnessy, L. Schmoll, T. Peters, University of Iowa, Iowa City, IA.

8:40 a.m.

Wind Tunnel Performance Evaluation for a Fungal Spore Personal Sampler. (PO 132-62) W. Su, Y. Cheng, Lovelace Respiratory Research Institute, Albuquerque, NM.

9:00 a.m.

An Update on Combining Optical / Scanning Electron Microscopy Analysis Methods for Forensic Dust Analysis. (PO 132-3) D. Baxter, Environmental Analysis Assoc., Inc., San Diego, CA.

9:20 a.m.

Application of ATP Bioluminescence Method to Analyze Performance of Traditional and Novel Bioaerosol Collectors. (PO 132-4) T. Han, G. Mainelis, Rutgers University, New Brunswick, NJ.

9:40 a.m.

Applying the Right Tool for the Job: Selecting the Appropriate Sampling Stencil for HEPA Filter Leakage Estimates. (PO 132-5) G. Hrbek, LANL, Los Alamos, NM.

10:00 a.m.

Particle Size Analysis for Mn in Welding Fume Generated by Hybrid Laser Arc Welding. (PO 132-6) D. Chute, Atrium EH&S Services, LLC, Reston, VA; P. Blomquist, Applied Thermal Sciences, Inc., Sanford, ME.

10:20 a.m.

Ultrafine Particle (UFP) Exposures in the Soderberg and Prebake Processes of an Aluminum Smelter. (PO 132-7) A. Dufresne, M. Debia, R. Tardif, Universite de Montreal, Montreal, QC, Canada; S. Weichenthal, Health Canada, Ottawa, ON, Canada.

10:40 a.m.

Potential Advanced Composite Materials Exposure During Aircraft Structural Maintenance Operations. (PO 132-8) R. Yon, US Air Force, Wright-Patterson AFB, OH.

11:00 a.m.

Flour Dust in Traditional Bakeries. (PO 132-9) S. Aubin, B. Roberge, Y. Cloutier, IRSST, Montréal, QC, Canada.

11:20 a.m.

Particulate Characterization and Control Evaluation for Carbon Fiber Composite Aircraft Crash Recovery Operations. (PO 132-10) M. Ferreri, J. Slagley, US Air Force, Wright-Patterson AFB, OH; D. Felker, D. Smith, US Air Force, Wright-Patterson AFB, OH.

11:40 a.m.

Exposure and Risk Assessment Due to Fungal Bioaerosols in Dry-Sausage Factories. (PO 132-11) X. Simon, P. Duquenne, V. Koehler C. Piernot, G. Greff, C. Coulais, Institut National de Recherche et de Sécurité (INRS), Vandoeuvre-les-Nancy, France.

Noon

Indoor/Outdoor Hexavalent Chromium Air Concentration During Stainless Steel Welding. (PO 132-12) M. Suen, B. Hodges, EORM, Oakland, CA.

CR 323

Toxic Substance Control Act: Not Just Asbestos

9:30 a.m.–10:30 a.m. + OCC, D139

Presenters: N. Feldscher, New York City Department of Environmental Protection, Corona, NY; D. Mueller, Saint-Gobain North America, Valley Forge, PA. **Moderator:** P. Stanch, NASA, Houston, TX.

The Toxic Substance Control Act (TSCA) was intended to regulate the manufacturing, processing, use, distribution and disposal of chemical substances and mixtures and was expanded to specifically include asbestos, lead-based paint, and radon. This is a broad regulation that can greatly impact all aspects of a chemical's life cycle (and your involvement therein). This presentation provides a comprehensive understanding of EPA's program of general chemical regulation, along with the specific programs for PCBs, asbestos, and Pb paint.

Stokinger Lecture

Some Recent Changes in the Control of Toxic Substances in the Workplace in the UK and the EU

12:30 p.m.–1:30 p.m. + OCC, B110



Lecturer: Len Levy OBE, PhD, FFOM, FBTS, Emeritus Professor of Environmental Health, Institute of Environmental Health, University of Cranfield, United Kingdom

The UK was one of the first countries to drive the “industrial revolution,” particularly the chemical industry and engineering, becoming one of the leading countries to develop research and regulation for industrial hygiene and toxicology. However, vast changes in the demographics of work in the UK have led to a realignment of priorities for both industries and for the UK Health and Safety Executive (HSE). At the same time, the UK’s membership in the European Union (EU) and most recently, the newly introduced EU Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH) Regulations are having an impact on the way the HSE and industry deal with the control of chemicals in the workplace.

This lecture will describe how occupational exposure limits are now set in the EU and the UK in these times of changed work demographics and stringent budgetary restraints. It will also cover newer findings, such as a re-evaluation of the “burden of occupational cancer” estimates that have not been reviewed since the figures produced by Doll and Peto in 1981.

CR 324

Accountability and Discipline in Safety: A Complementary Approach

1:00 p.m.–2:00 p.m. + OCC, B119

Presenter: D. Groover, D. Groover, BST, Ojai, CA.

Accountability and discipline are among the most confusing and controversial topics in safety. Clouding the matter is that many people use “discipline” and “accountability” interchangeably. This talk shows how accountability and discipline are distinct but complementary practices that help create balance and order in safety activities and the organization.

PO 133

Biosafety and Environmental Microbiology II: Current Topics in Bioaerosols and Agricultural Health and Safety

1:00 p.m.–3:00 p.m. + OCC, C126

Arranger: R. Strode, Chemistry & Industrial Hygiene, Inc., Wheatridge, CO. **Moderator:** C. Peart, Merck, West Point, PA. **Monitors:** C. Powell, Wisconsin Occupational Health Lab, Madison, WI; D. Matz-Siegel, Los Alamos National Lab, Los Alamos, NM.

1:00 p.m.

Air Sampling for Bioaerosols — What is the Significance? (PO 133-1)

M. Larranaga, Oklahoma State University, Stillwater, OK; H. Holder, SWK LLC, Blanco, TX; E. Althouse, Air Intellect LLC, Tallahassee, FL; E. Karunasena, D. Straus, Texas Tech University, Lubbock, TX.

1:20 p.m.

Relative Effectiveness of Impactor Sampling Among Six Airborne Viruses. (PO 133-2)

P. Raynor, J. Appert, T. Kuehn, Z. Zuo, S. Ge, University of Minnesota, Minneapolis, MN; S. Goyal, M. Abin, Y. Chander, H. Guarino, University of Minnesota, St. Paul, MN.

1:40 p.m.

Microbial Exposure Patterns and Concentrations in Feed Industry. (PO 133-3)

H. Park, I. Lee, Korea Occupational Safety and Health Agency, Incheon, Republic of Korea.

2:00 p.m.

Culture-Independent Characterization of Bacteria in Poultry and Dairy Bioaerosols Using Pyrosequencing: A New Approach. (PO 133-4)

M. Nonnenmann, A. Hussain, K. Gilmore, J. Levin, B. Bextine, University of Texas at Tyler, Tyler, TX; S. Dowd, Research and Testing Laboratory, Lubbock, TX; W. Ward, Stephen F. Austin State University, Nacadoches, TX.

2:20 p.m.

Inhalable and Respirable Organic Dust Concentrations During Broiler Production. (PO 133-5)

M. Nonnenmann, A. Hussain, K. Gilmore, J. Levin, University of Texas Health Science Center at Tyler, Tyler, TX; W. Ward, J. Bray, S. Jerez, Stephen F. Austin State University, Nacadoches, TX.

2:40 p.m.

Quantitative Spectrofluorometric Analysis of Pesticide Exposure and Exposure Control Measures. (PO 133-6) H. Zetelen, R. Fenske, K. Galvin, University of Washington, Seattle, WA.

PO 134

Ergonomics: Upper Extremity Considerations and Methodological Approaches

1:00 p.m.–3:20 p.m. + OCC, A108

Arranger and Moderator: M. O’Reilly, Albany University, Manlius, NY. **Monitors:** S. Tooley, The Boeing Company, Seattle, WA; L. Orta Anés, University of Puerto Rico, San Juan, PR.

1:00 p.m.

Evaluation of Fatigue Resulting from Intensive Computer Mouse Use with VDTlog. (PO 134-1) Y. Hwang, F. Chang, H. Liang, National Taiwan University, Taipei, Taiwan.

1:20 p.m.

Interventions for Overhead Drilling into Concrete. (PO 134-2) D. Rempel, M. Robbins, A. Barr, D. Star, I. Janowitz, University of California, San Francisco, Richmond, CA.

1:40 p.m.

Ergonomic Design and Radiologic Exposure Assessment of a Nuclear Pharmacy Workstation. (PO 134-3) S. Cole, J. McGlothlin, K. Weatherman, H. Nie, J. Poulson, Purdue University, West Lafayette, IN; M. Green, Indiana University, Purdue, Indianapolis, IN.

2:00 p.m.

Pre- and Post-MSD (Musculoskeletal Disorders) Symptom After the Implementation of Korean Traditional Mask Dance (KTMD) to Cosmetic Manufacturing Production Workers. (PO 134-4) S. Ham, Seoul National University, Seoul, Republic of Korea; W. Eoh, Hankook Cosmetics, Seoul, Republic of Korea; W. Ham, Korea Occupational Safety and Health Agency, Incheon, Republic of Korea.

2:20 p.m.

Review of Physiological Changes and Ergonomic Design Considerations for the Aging Populations. (PO 134-5) B. McGowan, Humantech, Inc., Ann Arbor, MI.

+ Technical Program: Thursday

2:40 p.m.

A Case Study of Proposed Enhancements to the AIHA Ergonomic Toolkit.

(PO 134-6) T. Blackwell, R. Thomas, A. Pierce, A. Snider, R. Seseck, Auburn University, Auburn, AL; S. Gibson, Ergonomics Applications, Salem, SC.

3:00 p.m.

Development of a Novel Model for Ergonomic Risk Assessment.

(PO 134-7) S. Moussavi Najarkola, NIOC Health Organisation, Tehran, Islamic Republic of Iran.

RT 252

Field-Portable and Mobile Analysis and Testing: Developing and Documenting Competencies

1:00 p.m.–3:30 p.m. + OCC, C121

Arranger: H. Varner, Environmental Hazards Services, LLC, Richmond, VA. **Moderator:** K. White, Consultive Services, Virginia Beach, VA. **Monitors:** C. Dezio, AIHA Registry Programs, LLC, Fairfax, VA; E. Pinzer, HUD, Washington, DC.

As the industrial hygiene field continues to grow and diversify, the need for competent individuals in new and emerging areas has increased. While certified individuals operate under a code of ethics that stipulate the need to practice only in areas of competency, other professionals are performing work in the field. There is a need for an expanded approach to determine and verify the competency of individuals, especially in the area of the use of field analytical techniques and direct-read instruments. To date, the AIHA Registry program for asbestos analysts has been one such program. This session will discuss some specific industry needs in the area of creating competencies for field analytical techniques and direct-read instruments from the viewpoints of the key stakeholders: government regulators, users, registry program administrators and equipment manufacturers. The area of XRF usage in determining the presence of lead-based paint and the determination of beryllium content in the field will be used as the basis from which a model for such programs is presented.

+ The Asbestos Analysts Registry (AAR).

R. Lieckfield, Bureau Veritas North America, Inc., Novi, MI.

+ An XRF Field Measurement Registry.

H. Varner, Environmental Hazards Services, LLC, Richmond, VA.

+ An XRF Field Measurement Registry —

A User Perspective. C. Becker, Maine Chemist Service, Inc., Newport News, VA.

+ An XRF Field Measurement Registry — A HUD Perspective. W. Friedman, HUD, Washington, DC.

+ An XRF Field Measurement Registry — A Manufacturer's Perspective. J. Paster, RMD Instruments Corp., Watertown, MA.

+ A Beryllium Field Analysis Registry. M. Brisson, Savannah River Nuclear Solutions, Aiken, SC.

RT 253

Leveraging ES&H Practice with the Latest Technology

1:00 p.m.–3:30 p.m. + OCC, B113

Arranger: D. Larson, Lawrence Livermore National Laboratory, Livermore, CA.

Moderator: G. Hutcheson, John Deere, Waterloo, IA. **Monitors:** M. Bergner, Conestoga-Rovers & Associates, St. Paul, MN; K. Diep, American Airlines, Fort Worth, TX.

New technology has had an incredible impact on the systems and tools the ES&H professional uses today to become better equipped with information, more productive, and more competitive. This roundtable compares different computing platforms, discusses a variety of applications available for hand held devices and phones, statistical sampling and emergency response software, and web-based data management system. Understanding the difference between these tools helps the professional decide which technology works best for them to leverage their practice to become more effective.

+ Computing Platforms, the Good, Bad and Ugly. J. Svagr, New York Blood Center, New York, NY.

+ Smart Phones and IH Applications.

T. Carraway, Jr., US Department of State, Aberdeen, MD.

+ There's an App for That ... M. Rollins, Thermo Fisher Scientific, Waltham, MA.

+ Chemical Emergency Medical Management (CHEMM) Website and Applications. J. Koerner, US Department of Health and Human Services, Washington, DC.

+ How Many Samples? Using Visual Sample Plan (VSP) for IH Purposes. B. Pulsipher, Pacific Northwest National Laboratory, Richland, WA.

+ Web-Based Data Management Systems.

T. Hawkinson, The Toro Company, Minneapolis, MN.

RT 254

The GHS is Coming—Will You Be Ready?

1:00 p.m.–4:00 p.m. + OCC, A106

Arranger: D. Deeds, Industrial Health & Safety Consultants, Inc., Woodbridge, CT. **Moderator:** J. Panko, ChemRisk, LLC, Pittsburgh, PA. **Monitors:** E. Gillespie, The University of Findlay, Findlay, OH; S. Dawson, DuPont, Pascagoula, MS.

The GHS has been in development for almost 20 years, and we are finally starting to see widespread implementation. In 2010, many countries and regions adopted GHS classification and labeling for substances. Federal OSHA will shortly issue their revised Hazard Communication Standard to conform to the GHS. This roundtable will explore what both chemical manufacturers and users need to do to prepare for GHS implementation in their facilities. This process will present challenges, but the potential benefits for improved safety in chemical handling will be great.

+ Status of the OSHA Hazard Communication Standard Revision. F. May, 3M Company, Austin, TX.

+ The Challenge of Reclassifying Substances and Mixtures Under GHS. R. Skoglund, 3M Company, St. Paul, MN.

+ Updating (M)SDS Authoring System for GHS — How to Get Ready. A. Bolt, H.B. Fuller Company, St. Paul, MN.

+ Challenges and Approaches for Creating "Global" GHS SDS and Labels in a World of Nonuniform Implementation. D. Deeds, Industrial Health & Safety Consultants, Inc., Woodbridge, CT.

+ Purple Fever Sweeps Europe — The CLP — Classification, Labeling and Packaging of Chemical Substances. M. Johnson, IHS, Englewood, CO; F. Trudeau, IHS, St. Laurent, QC, Canada.

+ Implementing GHS Training at Your Company ... A Global Perspective. D. Deeds, Industrial Health & Safety Consultants, Inc., Woodbridge, CT.

RT 255

Notable Confined Spaces

1:00 p.m.–4:00 p.m. + OCC, F149

Arranger and Moderator: M. DeVany, DeVany Industrial Consultants, Vancouver, WA. **Monitors:** W. Lashbrook, DeVany Industrial Consultants, Vancouver, WA; C. Ottoson, OSHA, Salem, OR.

So often workers enter confined spaces but are not trained to recognize when the work to be done can change the confined space from safe to potentially fatal. In one decade-long Federal Chemical Safety Board study (Mary DeVany, 2003), 80% of the people who died had done work before, inside that exact confined space, without any problems. In 40% of fatal atmosphere accidents, the hazard was not present at the time of initial entry. 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 sixth annual notable CS roundtable, seasoned CS 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 presentations, the fatal conditions were recognized and eliminated, or at least acceptably controlled, protecting the workers. In others, the outcome was serious injury or death.

- + **Fuel for the Fire — Oxygen Enriched Environments in Confined Spaces.** S. Thomas, OSHA, Bend, OR.
- + **Water Supply System Vault Entry.** A. Paris, Joint Programs, Boeing, Portland, OR.
- + **Inside a Fishing Vessel's Fuel Tank: Count the Hazards.** M. Cohen, University of Washington, Seattle, WA.
- + **Hospitalization from Unknown Chemicals in a Reclassified Space.** P. Utterback, OSHA, Medford, OR.
- + **Hexavalent Chromium Exposure Control for Welders in Confined and Enclosed Spaces.** V. Runnion, Argus Pacific, Inc., Seattle, WA.

RT 256

Respiratory Protection in Healthcare: Changing Standards and Best Practices

1:00 p.m.–4:30 p.m. + OCC, F152

Arranger and Moderator: M. Roe, 3M Company, St. Paul, MN. **Monitors:** L. Iverson-Leirimo, Gunderson Lutheran Health System, Inc., La Crosse, WI; N. McCullough, 3M Company, St. Paul, MN.

The use of respiratory protection in health care significantly increased with the 1997 proposed OSHA Tuberculosis standard, was reinforced with the SARS epidemic, and challenged with the H1N1 Pandemic. New guidelines and standards have been implemented or are being developed to address employee protection and infection

control against infectious bioaerosols. This roundtable will address programmatic aspects of respiratory protection programs in health care settings, including surge planning and enhancing use compliance. It will also cover lessons learned from recent regulations, updating existing guidelines, development of new standards, and what it all means for industrial hygienists.

- + **CDC Guidelines for Respiratory Infection Control in Health Care.** T. Seitz, NIOSH, Cincinnati, OH.
- + **Respiratory Protection for Bioaerosols.** S. Siu, SRS Consultants Inc., London, ON, Canada.
- + **Canadian Standards Association — Z94.4 Bioaerosols Control Banding.** S. Smith, 3M Canada Company, Brockville, ON, Canada.
- + **Issues and Controversies in Implementing California's Aerosol Transmissible Disease Standard.** D. Gold, OSHA, Oakland, CA.
- + **Planning for Surge: The Veterans Affairs Efforts to Address Infectious Disease Surge Capacity.** A. Eagan, Veterans Health Administration, Gainesville, FL.
- + **Best Practices in Health Care Respiratory Protection Programs.** S. Derman, Medishare Environmental Health & Safety Services, Cupertino, CA.
- + **Enhancing Adherence to Respiratory Protection Among Healthcare Workers.** K. Nichol, University of Toronto, Toronto, ON, Canada.

RT 257

Diacetyl and Diacetyl Substitutes — Where Are We Now?

1:00 p.m.–4:30 p.m. + OCC, B116

Arranger: L. McKernan, NIOSH, Cincinnati, OH. **Moderator:** T. Lentz, NIOSH, Cincinnati, OH. **Monitors:** G. Dotson, NIOSH, Cincinnati, OH; J. McKernan, EPA, Cincinnati, OH.

Diacetyl, a common ingredient in butter and other flavorings, continues to receive significant attention in our profession. Occupational exposures to diacetyl have been associated with flavorings related lung disease including bronchiolitis obliterans (BO), a rare lung disease characterized by fixed airways obstruction. In response, companies have begun to use diacetyl substitutes, such as 2,3-pentanedione, to reduce worker exposure to diacetyl. Recent toxicological research with 2,3-pentanedione suggested deleterious effects. California Occupational Safety and Health Administration recently promulgated a standard for diacetyl and federal OSHA has

announced that they are initiating rulemaking efforts. The objective of this session is to focus on key developments for diacetyl and diacetyl substitutes including medical surveillance programs, exposure assessment strategies, engineering controls, analytical chemistry techniques, and a proposed NIOSH recommended exposure limit (REL).

- + **Respiratory Disease and Diacetyl Exposure in Flavoring Manufacture: A Public Health Practice Investigation.** B. Materna, California Department of Public Health, Richmond, CA.
- + **Exposures and Developments in Industry.** J. Hallagan, The Flavor and Extract Manufacturers Association of the United States, Washington, DC.
- + **The NIOSH Diacetyl Criteria Document.** L. McKernan, NIOSH, Cincinnati, OH.
- + **An Update of Engineering Control Technology on Downstream Users of Food Related Flavorings.** A. Garcia, NIOSH, Cincinnati, OH.
- + **Diacetyl and Diacetyl Substitutes in the Food Production Industry.** B. Curwin, NIOSH, Cincinnati, OH.
- + **Responding to the "Diacetyl Experience."** L. Ungers, Ungers & Associates, Inc., Cincinnati, OH.
- + **Advances in Sampling and Analytical Methodology for Diacetyl and Possible Diacetyl Substitutes.** W. Hendricks, OSHA, Salt Lake City, UT.

CR 325

How to Develop and Sustain an Effective Accident Investigation Program

2:30 p.m.–3:30 p.m. + OCC, B119

Presenter: B. Moriarty, Chubb Insurance, Glen Ellyn, IL. **Moderator:** S. Eversmeyer, Port of Portland, Portland, OR. **Monitor:** L. Cena, University of Iowa, Iowa City, IA.

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, which leads the investigator to an exposure control technique that is based on the accident root cause.

+ Poster Sessions: Monday–Wednesday

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, May 16 through 1:00 p.m.,
Wednesday, May 18.

Poster Session Arrangers

- Chad Dowell, NIOSH, Cincinnati, OH.
- Aleksandr Stefaniak, NIOSH, Morgantown, WV.
- R. Kent Olstenstad, University of Alabama, Birmingham, AL. (Student)

Poster Sessions 401

Author Attend Time: Monday, May 16,
10:00 a.m.–Noon

Aerosols

- PS 401-1 The Study of Surviving of Bacteria on Charcoal Filters Under Nutrient, Moisture Regain and Water Content Conditions.** C. Lai, C. Chen, H. Wen, Chung Shan Medical University, Taichung, Taiwan; P. Hung, C. Chang, Institute of Occupational Safety and Health, Taipei, Taiwan.
- PS 401-2 Characteristics of Acid Gas and Acid Aerosol Emissions from Trichlorosilane Burning Processes Under Various Humidity Conditions.** J. Soo, P. Tsai, S. Li, W. Lee, National Cheng Kung University, Tainan, Taiwan; J. Chen, National Kaohsiung First University of Science & Technology, Kaohsiung, Taiwan; C. Chang, Y. Ho, Institute of Occupational Safety and Health, Taipei, Taiwan.
- PS 401-3 Ultrafine Particle (UFP) Exposures During Different Welding Processes in a Welding Training School.** M. Debia, R. Tardif, A. Dufresne, University of Montreal, Montreal, QC, Canada; S. Weichenthal, Health Canada, Ottawa, ON, Canada.
- PS 401-4 Portable Aerosol Spectrometer for Nanoparticle Monitoring.** A. Ghimire, J. Gromala, Particle Measuring Systems, Boulder, CO.
- PS 401-5 Monitoring and Comparison of Airborne Nanoparticle Concentrations in Two Carbon Nanotubes Growth Laboratories.** J. Ha, Y. Shin, S. Lee, Inje University, Gimhae, Republic of Korea.

Air Sampling Instrument Performance

- PS 401-6 Respirable Crystalline Silica Measurement in Coal Mine Dust with High Flow Rate Samplers.** T. Lee, E. Lee, S. Kim, W. Chisholm, M. Harper, NIOSH, Morgantown, WV.
- PS 401-7 Using a Tracer Gas to Determine Air Exchange Rate: A Side-by-Side Comparison of Instrumentation.** J. Lang, J. Persky, C. Simmons, R. Jones, Environ International Corp., Chicago, IL.

Biosafety and Environmental Microbiology

- PS 401-8 Exposure Assessment of Legionella pneumophila in Nursing Homes of Taiwan.** C. Chang, N. Chen, Y. Wu, K. Ming, National Taiwan University, Taipei, Taiwan.
- PS 401-9 Dispersion of Bioaerosols in the Negative Pressure Isolation Rooms.** T. Lin, F. Lin, J. Liu, H. Chang, China Medical University, Taichung, Taiwan; P. Hung, C. Chang, Institute of Occupational Safety and Health, Taipei, Taiwan.

Indoor Environmental Quality

- PS 401-10 Assessment of Exposure to Airborne Fungal Fragments Using (1–3)- β -D-glucan Measurement: An Office Building Study.** J. Park, J. Cox-Ganser, NIOSH, Morgantown, WV.

Industrial Hygiene General Practice

- PS 401-11 Direct-to-Consumer Genetic Testing: What Occupational Health Professionals Should Know.** T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.
- PS 401-12 U.S. Army Vehicle Tailpipe Local Exhaust Ventilation (LEV) System Requirements.** G. Berckman, C. Harrison, US Army, Meade, MD.
- PS 401-13 A Proposal for Calculating Occupational Exposure Limits for Organic Compounds on the Basis of Their Physicochemical Properties.** M. Jakubowski, Institute of Occupational Medicine, Lodz, Poland.
- PS 401-14 Comparison of Collection Efficiencies Between Filter and Impinger for Evaluation of Occupational Exposure to Toluene Diisocyanates (TDIs) in Spray Painting and Drying Process.** J. Roh, H. Park, J. Won, C. Kim, Yonsei University College of Medicine, Seoul, Republic of Korea.
- PS 401-15 Analysis of Peracetic Acid-Based Sterilizers.** D. Duffy, ESIS Health, Safety

and Environmental, Chicago, IL; J. Kenny, ESIS Environmental Health Lab, Cromwell, CT.

- PS 401-16 Work Practices and Attitudes Toward Safety in Small Collision Repair Shops.** A. Bejan, D. Parker, M. Skan, Park Nicollet Institute, Minneapolis, MN; L. Brosseau, University of Minnesota, Minneapolis, MN.
- WITHDRAWN PS 401-17 Assessment of Occupational Hazards and Legislative Compliance in Animal Shelters.** K. Idler, C. Lawrie, Ontario Ministry of Labour, Kingston, ON, Canada.

Poster Sessions 402

Author Attend Time: Monday, May 16,
2:00 p.m.–4:00 p.m.

Communication and Training

- PS 402-1 Self-Paced Acquisition of Business Acumen to Manage HSE.** J. Hinton, Baker Hughes, Houston, TX.

Community Environmental Health

- PS 402-2 Data Available on the Environmental and Occupational Burden of Disease in Canada.** P. Williams, E Risk Sciences, LLP, Boulder, CO; K. von Stackelberg, E Risk Sciences, LLP, Boston, MA.
- PS 402-3 Urinary Excretion of Cadmium, and Diabetes Among Residents Nearby to an Industrial Complex: Sihwa-Banwol Industry, Korea.** K. Yi, C. Yoon, Seoul National University, Seoul, Republic of Korea.
- PS 402-4 In Search of Background Asbestos in Ambient Air.** J. Kegebein, Kegebein Consulting, Oakland, CA.

Exposure Assessment Strategies

- PS 402-5 Exposure Assessment of Exhaust-Related Agents During Sub Sea Road Tunnel Rehabilitation Work.** S. Førelund, Norwegian University of Science and Technology, Trondheim, Norway; M. Buhagen, University Hospital of Trondheim, Trondheim, Norway.
- PS 402-6 Exposure Assessment of Dust and Quartz During Sub Sea Road Tunnel Rehabilitation Work.** M. Buhagen, University Hospital of Trondheim, Trondheim, Norway; S. Førelund, Norwegian University of Science and Technology, Trondheim, Norway.
- PS 402-7 Application of Targeted Risk Assessment in the Workplace to Exposure Assessment.** S. Czerczak, M. Kupczewska Dobecka, The Nofer Institute of Occupational Medicine, Lodz, Poland.

- PS 402-8 Exposure to Chemical Agents of Motorway Workers.** D. Cottica, E. Grignani, Fondazione Salvatore Maugeri, Padova, Italy.
- PS 402-9 Exposure Assessments: Are We Properly Accounting for All Contaminants?** T. Morris, Morris Innovative IH&S Solutions, Cincinnati, OH.
- PS 402-10 Solvent and Isocyanate PPE Breakthrough Using PERMEA-TEC Sensors During Spray Painting in Auto Body Repair Centers.** D. Zanarini, D. Ceballos, M. Yost, University of Washington, Seattle, WA.
- PS 402-11 Application of Bayesian Decision Analysis to Determine the Modified Exposure Profile and the Priority of High Health-Risk Industries.** S. Wang, P. Tsai, National Cheng Kung University, Tainan, Taiwan.
- PS 402-12 Random Airspeed Variability Within a Room and its Implications for Exposure Modeling.** C. Keil, K. Musgrave, Bowling Green State University, Bowling Green, OH.
- PS 402-13 Successful Coordination of Industrial Hygiene and Operations Staff in Evaluation of Beryllium Activities.** D. Siegel, B. Duran, Los Alamos National Laboratory, Los Alamos, NM.
- PS 402-14 Design and Conduct of an Industrial Hygiene Field Site Monitoring Strategy for Offshore Production Operations to Document the Potential for Occupational Exposures to Chemical and Physical Hazards as Well as Platform Surveys for Asbestos and Lead.** J. Koehn, Jan Koehn, CIH, Inc., Houston, TX; H. McCutcheon, Devon Energy, Houston, TX.
- PS 402-15 Sampling Strategy Design of Potential Benzene and Hydrogen Sulfide Personal Breathing Zone Exposures for Field Technicians Associated with Gas Pipeline Operations Located in New Mexico, Including Industrial Hygiene Monitoring and Assessment Results.** J. Koehn, Jan Koehn, CIH, Inc., Houston, TX; R. Acker, Ackcellent Consultant, Monument, CO; C. Newman, HIH Laboratory, Inc., Webster, TX.
- PS 402-16 Dust Exposure and Respiratory Symptoms Among Workers in Southern Tanzania Softwood Sawmill Industries.** L. Rongo, MUHAS, Dar es Salaam, United Republic of Tanzania.
- PS 402-17 An Evaluation of Noise Exposure Among Pipeline Construction Workers Using a Task-Based Methodology.** L. Southgate, SNC-Lavalin Inc., Montreal, QC, Canada.

- PS 402-18 Analysis of Historical Industrial Hygiene Data: A Case Study Involving Benzene Exposures at a Petrochemical Manufacturing Facility (1974–1999).** J. Sahmel, K. Devlin, T. Ferracini, M. Ground, ChemRisk, Inc., Boulder, CO; A. Burns, ChemRisk, Inc., Pittsburgh, PA; D. Paustenbach, ChemRisk, Inc., San Francisco, CA.

Poster Sessions 403

Author Attend Time: Tuesday, May 17, 10:00 a.m.–Noon

Agricultural Health and Safety

- PS 403-1 Skid Loader Noise Exposure Assessment in a Confinement Dairy Barn.** S. Milz, E. Smith, F. Akbar-Khanzadeh, S. Khuder, University of Toledo, Toledo, OH.
- PS 403-2 Inflammatory Constituents in Agricultural Dusts.** S. Kiryчук, W. Dawicki, G. Katselis, D. Schneberger, N. Ovsenek, Z. Belak, N. Just, J. Gordon, University of Saskatchewan, Saskatoon, SK, Canada.
- PS 403-3 Evaluation of Exposures to Pesticides and Parasitic Vectors During Inspection of Imported Plants.** S. Durgam, C. Aristeguieta, NIOSH, Cincinnati, OH.

Ergonomics

- PS 403-4 Ergonomic Intervention by Industrial Hygiene at a Large Government Facility.** A. Lee, D. Kauffman, US Army, Aberdeen, MD.
- PS 403-5 Ergonomic Practices in a Taiwan Metal Manufacturing Factory for the Prevention of Work-Related Musculoskeletal Disorders.** P. Sung, C. Lee, H. Chen, Chaoyang University of Technology, Taichung County, Taiwan.

Health Care Industries

- PS 403-6 Evaluation of Potential Noise Exposures in Hospital Operating Rooms.** L. Chen, S. Brueck, NIOSH, Cincinnati, OH.
- PS 403-7 Development of a Web-Based Health and Safety Practices Survey of Health Care Workers: Findings of Cognitive and Pilot Testing.** J. Boiano, A. Steege, M. Haring Sweeney, NIOSH, Cincinnati, OH; M. Stapleton, J. Newsome, M. Popovic, Westat, Rockville, MD.

- PS 403-8 Evaluation of Ultraviolet Light Blocking Properties of Personal Protective Equipment for Use in Orthopedic Operating Rooms.** R. Kirwan, N. Greeson, G. Tencer, Duke University, Durham, NC.
- PS 403-9 A Review of the Occupational Hazards Related to Medical Lasers.** J. Pierce, ChemRisk, Chicago, IL; S. Lacey, R. Lopez, J. Lippert, M. Colvard, University of Illinois at Chicago, Chicago, IL.

Laboratory Health and Safety

- PS 403-10 Exposures to a Methylmethacrylate During Componential Analysis of Methylmethacrylate.** Y. Cho, Korea Occupational Safety and Health Agency, Yeosu City, Republic of Korea.
- PS 403-11 Controlling Formaldehyde Emissions in an Academic Gross Anatomy Laboratory: A Success Story.** C. King, P. Castagna, R. Klein, Yale University, New Haven, CT.

Lead

- PS 403-12 Air Lead Concentrations in Smelting and Litharge Factories.** B. Lee, Soonchunhyang University, Cheonan, Republic of Korea.
- PS 403-13 Handheld XRF for Immediate, On-Site Determinations of the Presence of Lead (Pb).** K. Russell, Olympus Innov-X, Woburn, MA.

Mold

- PS 403-14 Opportunistic Fungal Pathogen Screen: A New Method for Rapid Assessment of Mold-Affected Medical Facilities.** J. Scott, R. Summerbell, M. Saleh, Sporometrics, Inc., Toronto, ON, Canada.
- PS 403-15 Fungal Habitat and Physiology. A Focused Approach to the Investigation of a Strange Fungal Contamination: Herpotrichiellaceae in a Production Process.** K. White, Sporometrics, Toronto, ON, Canada; R. Summerbell, University of Toronto, Toronto, ON, Canada.
- PS 403-16 Mold Assessment and Remediation in a Public Housing Complex in New Haven, Connecticut.** L. Cannon, N. Santore, I. Nambiar, B. Silverman, EnviroMed Services, Inc., Meriden, CT.

+ Poster Sessions: Monday–Wednesday

Sampling and Analysis

- PS 403-17 Sampling and Analysis of Airborne Trichloramine in Indoor Swimming Pools.** T. Chu, S. Tsai, National Taiwan University, Taipei, Taiwan; S. Cheng, Council of Labor Affairs, Executive Yuan, Taipei, Taiwan.
- PS 403-18 Analytical Methods for Determination of Compliance with OEL Values Established in Poland in 2009-10.** J. Gromiec, S. Brzezniak, W. Wesolowski, M. Kucharska, Nofer Institute of Occupational Medicine, Lodz, Poland.
- PS 403-19 The Discrimination of Asbestos Fibers from Other Fibers on Collected Air Filters.** L. Monteith, University of Washington, Seattle, WA.
- PS 403-20 The Stability of Sulfur Compounds, Low Molecular Weight Gases and VOCs in Four Air Sample Bag Materials.** C. Kuhlman, L. Coyne, SKC, Inc., Eighty Four, PA.
- PS 403-21 The Development and Validation of a Diffusive Sample with a Variable Sampling Rate for Long-Term Sampling of VOCs.** L. Coyne, C. Kuhlman, SKC, Inc., Eighty Four, PA.

Poster Sessions 404

Author Attend Time: Tuesday, May 17,
1:00 p.m.–3:00 p.m.

Engineering and Control Technology

- PS 404-1 Characterizing Ventilation in Collision Repair Spray Painting Booths.** K. Broadwater, M. Yost, D. Ceballos, University of Washington, Seattle, WA; C. Whitaker, Washington State Department of Labor and Industries, Olympia, WA.
- PS 404-2 Local Exhaust Ventilation: Excellent for the Effective Reduction and Control of Combustible Dust.** K. Housman, Liberty Mutual Group, Birmingham, AL.
- PS 404-3 Resolution of Halovision Cases by Substitution of Reactive Amines in a Polyurethane Foaming Industry.** J. Jang, J. Shin, N. Lee, H. Park, J. Kwon, K. Chung, KOSHA, Incheon, Republic of Korea.
- PS 404-4 Crystalline Silica Exposure During Trenching Activities.** S. Al Rawahi, Petroleum Development Oman, Muscat, Oman.
- PS 404-5 Unexpected Cadmium and Beryllium Dust Exposures from Hand Grinding on Aircraft Parts — A Case Study.** D. Weber, Liberty Mutual Insurance, Glastonbury, CT.

Nanotechnology

- PS 404-6 Safe Practices for Working with Engineered Nanomaterials in Research Laboratories.** C. Beaucham, C. Geraci, L. Hodson, NIOSH, Cincinnati, OH; S. Tsai, M. Ellenbecker, University of Massachusetts Lowell, Lowell, MA.
- PS 404-7 Integration and Analysis of Existing Information Available for Building REACH-Compatible Exposure Scenarios for Nanomaterials.** K. Clark, M. Riediker, Institute for Work and Health, Lausanne, Switzerland; M. Van Tongeren, Institute of Occupational Medicine, Edinburgh, UK; and NANEX Consortium, European Union, Belgium.
- PS 404-8 Engineering Control Recommendations for Nanomaterials.** J. McKernan, US EPA, Cincinnati, OH; C. Geraci, NIOSH, Cincinnati, OH; M. Ellenbecker, K. Dunn, S. Tsai, University of Massachusetts Lowell, Lowell, MA.
- PS 404-9 Assessment of Nanoparticles and Worker Hazards: Chemical-Mechanical Planarization in Semiconductor Wafer Production.** M. Shepard, H. Morgan, S. Brenner, University at Albany, Albany, NY.
- PS 404-10 A Critical Evaluation of Past and Present Material Safety Data Sheets (MSDS) for Engineered Nanomaterials.** C. Crawford, L. Hodson, C. Geraci, NIOSH, Cincinnati, OH.
- PS 404-11 Dustiness of Nanomaterials.** D. Evans, L. Turkevich, NIOSH, Cincinnati, OH.

Occupational Epidemiology

- PS 404-12 Study on Work-Related Fatigue and Stress of University Faculties — A Private Technological University.** C. Tsai, M. Chen, J. Shieh, Chung Hwa University of Medical Technology, Tainan County, Taiwan; I. Mao, Chung Shan Medical University, Taichung City, Taiwan.

Personal Protective Clothing and Equipment

- PS 404-13 Use of a Robotic Sprayer and Permeation Panel to Evaluate Glove Efficacy Against Isocyanates.** D. Ceballos, NIOSH, Cincinnati, OH; M. Yost, K. Broadwater, R. Crampton, University of Washington, Seattle, WA; M. Millbauer, Green River Community College, Auburn, WA.

Respiratory Protection

- PS 404-14 Evaluation of the Benefit of the User Seal Check on N95 Filtering Facepiece Respirator Fit: A Pilot Study.** D. Viscusi, Z. Zhuang, R. Shaffer, NIOSH, Pittsburgh, PA; M. Bergman, URS Corp., Pittsburgh, PA.
- PS 404-15 Physiological Evaluation of Air-Fed Ensembles During Exercise.** N. Turner, J. Powell, D. Novak, E. Sinkule, A. Shepherd, NIOSH, Pittsburgh, PA.

Risk Assessment (Management)

- PS 404-16 An Attempt to Assign the Skin Notation of Chemicals According to Their Molecular Structure.** S. Czerczak, M. Kupczewska Dobecka, The Nofer Institute of Occupational Medicine, Lodz, Poland.
- PS 404-17 Application of an Updated Methodology for Deriving Immediately Dangerous to Life or Health (IDLH) Values.** A. Parker, A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH; S. Dotson, NIOSH, Cincinnati, OH.

Toxicology

- PS 404-18 Dose-Dependent Responses of Human Skin to Industrial Solvent and Mixed Hydrocarbon Exposures.** C. Richard, Medical Science Affiliates, Columbia, MD; P. Lehman, T. Franz, Cetero Research, Fargo, ND.

WD 504 Wood Dust Posters

Author Attend Time: Tuesday, May 17,
Noon–1:00 p.m.

Arrangers: M. Harper, NIOSH, Morgantown, WV; P. Gorner, INTS, Vandoeuvre, France.

- WD 504-1 Wood Dust Toxicology: Links Between Toxic Intensity, Chemical Polyphenol Analysis and Infrared Spectra.** L. Drissi Bakhkhat, LSTB, Rabat, Morocco & LERMAB, Nancy, France; A. Donnot, M. Rigo, D. Perrin, A. Merlin, LERMAB, Nancy, France; A. Hakam, LSTB, Rabat, Morocco.
- WD 504-2 Occupational Exposure to Polycyclic Aromatic Hydrocarbons in Wood Dust.** K. Huynh, E. Dansiman, P. Schupfer, B. Danuser, Institute for Work and Health, Lausanne, Switzerland.

WD 504-3 Determinants of Monoterpene Exposure in the Danish Furniture Industry. K. Hagström, Department of Occupational and Environmental Medicine, Örebro, Sweden; G. Jacobsen, T. Sigsgaard, V. Schlünssen, Department of Environmental and Occupational Medicine, Aarhus, Denmark; I. Schaumburg, Neuro Centre, Aarhus, Denmark; M. Erlandsen, Department of Biostatistics, Aarhus, Denmark.

WD 504-4 Preliminary Tests on a Modification to the IOM Sampler to Prevent Collection of Ultra-large Particles in Wood Dust Samplings. G. Gori, M. Carrieri, F. Salamon, M. Scapellato, G. Bartolucci, University of Padua, Padova, Italy; L. Cornacchia, F. Tidei, ASL Civitavecchia, Rome, Italy.

WD 504-5 Gallic Acid Used as a Chemical Marker in Assessing Oak Dust Exposure. G. Bartolucci, P. Maestrelli, V. Lodde, M. Carrieri, M. Scapellato, F. Salamon, G. Gori, University of Padua, Padova, Italy.

WD 504-6 A new HPLC/MS Method Compared With an Established GC/FID (MDHS 83/2) Method for Analysis of Allergenic Resin Acids in Wood Dust. S. Axelsson, Örebro University Hospital, Örebro, Sweden; K. Eriksson, The University Hospital of Northern Sweden, Umea, Sweden; U. Nilsson, Stockholm University, Stockholm, Sweden.

WD 504-7 Wood Solid Exposure Analysis in Dust from Industrial Wood Processing Facilities by Diffuse Reflectance Infrared Fourier Transform Spectroscopy. C. Kwon, R. Rando, Tulane University, New Orleans, LA.

WD 504-8 Evaluation of the Haz-Dust IV (EDC) Real-Time Dust Monitor for Thoracic Sampling of Wood and Other Construction Dusts. S. Srimeechai, R. Rando, Tulane University, New Orleans, LA.

WD 504-9 Occupational Exposure to Wood Dust in Cutting Process. R. Patel, Safe Workplace Inc., Anand, Gujrat, India.

Poster Sessions 405 — Graduate and Undergraduate Students

Author Attend Time: Wednesday, May 18, 10:00 a.m.–Noon

Graduate and undergraduate students present to discuss research and answer questions.

All posters are open for viewing 9:00 a.m., Monday, May 16 through 1:00 p.m., Wednesday, May 18.

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Monday, May 16, 9:00 a.m.–5:30 p.m.
Tuesday, May 17, 9:00 a.m.–3:00 p.m.
Wednesday, May 18, 9:00 a.m.–1:30 p.m.

Expo Opening Cocktail Reception

Monday from 4:00 p.m.–5:30 p.m. Bring your complimentary drink ticket from your registration packet.

Prizes – Prize Booth #1656

Complete the prize drawing form in your program addendum and drop it in the prize bins in Prize Booth. Monday Tuesday will feature drawings for money and free registrations to AIHce 2012 in Indianapolis, IN.

Passport to Prizes – Prize Booth #1656

Have your passport stamped by participating exhibitors, and drop your entry at the Prize Booth #1656 by noon, Wednesday. Winning names will be drawn at 12:30 p.m. on Wednesday. The Grand Prize is a trip to AIHce 2012 in Indianapolis, IN. 2nd Prize is \$1,000.

Special Exhibit in the Expo

AIHce 2011 Clandestine Drug Lab Exhibit, Booth #1759

Display provided by AIHA's Clan Lab Working Group



AIHA once again features a mock clandestine drug lab display that focuses on hazards associated with the production of illicit drugs such as methamphetamine and marijuana indoor grow operations. Representatives from Multnomah County Sheriff and Gresham Fire Department will be on hand to demonstrate how they approach, monitor and mitigate health hazards associated with clandestine drugs. Tactical response and decontamination trailers will be on display along with a self guided display educating visitors on clandestine drug laboratory hazards.

Expo Theater: Product Demos and Presentations, Hall D

Monday, May 16

See presentation descriptions on pages 36 and 41.

10:00 a.m.

A New Passive Sampler for Low Level VOC Measurements, SKC

10:30 a.m.

3E Mobile: Putting MSDS Management in the Palm of Your Hand, 3E Company

11:30 a.m.

When the Dust Settles: A Brief Tutorial on Combustible Dust and Preventive Housekeeping, Nilfisk Industrial Vacuums

Noon

Area Monitoring Sampling Kit to Collect Multiple Airborne Contaminants from Chemical/Petroleum Spills, Galson Laboratories

12:30 p.m.

New, Mobile and Wireless Area Monitoring and Fence Line System, Draeger Safety, Inc.

1:00 p.m.

QuadModeSM Air Sampling Technology Found in the Gilian GilAir Plus, Sensidyne, LP

1:30 p.m.

Get Aggressive with Microbial Air Sampling — A New Approach to Improve Data Consistency and Interpretation, Mycometer, Inc.

Tuesday, May 17

See presentation descriptions on pages 52 and 59.

9:30 a.m.

Creating a Calibrated Exposure Chamber to Verify the Performance of Air Samplers and Respirator Cartridges, Assay Technology Inc./AT Labs/Miller Nelson (MNR)

10:00 a.m.

New Products Developments in XRF Analysis, Thermo Scientific — Air Quality Instruments and Niton Analyzers

Noon

Explosion Proof/Dust Ignition Proof Vacuum Cleaner System, Tiger-Vac Inc. USA

12:30 p.m.

EVA – The Latest in Powered Air-Purifying Respirator Technology, Bullard

1:00 p.m.

New Product Introduction – FS60 LiftPod[®] by JLG, JLG Industries, Inc.

1:30 p.m.

Revolutionary Wireless Solution for Whole-body and Hand-arm Vibration Exposure Assessment per ACGIH[®] TLV Guidelines and ANSI S2.70-2006, Casella CEL Inc.

Wednesday, May 18

See presentation descriptions on pages 68 and 72.

9:30 a.m.

Mercury Tracker 3000IP — Real Time, Continuous Reading Mercury Vapor Analyzer, Mercury Instruments USA

10:00 a.m.

Reducing Strains, Sprains and Repetitive Stress Injuries with a Proven Best Management Practice — Active Release Techniques, ART Corporate Solutions

Noon

Gasmet Model DX-4030, World's First Truly Portable FTIR Multi-Component Gas Analyzer, Gasmet Technologies Inc.

12:30 p.m.

GrayWolf's AdvancedSense[™] Meter; Innovative IH/IAQ Data Collection, GrayWolf Sensing Solutions




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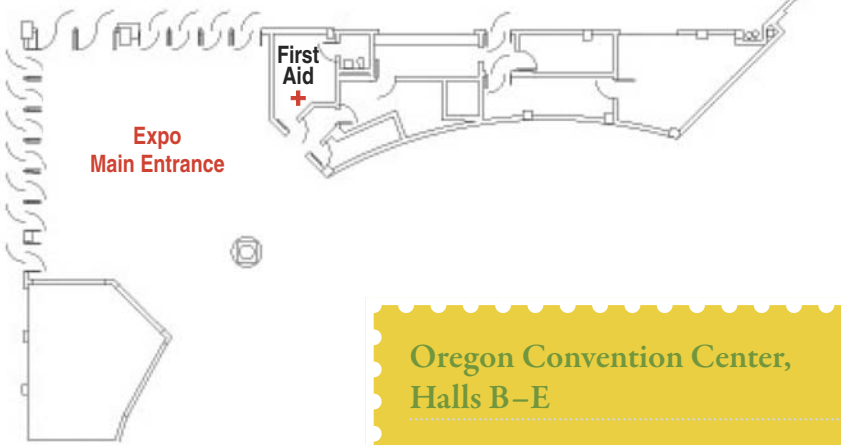
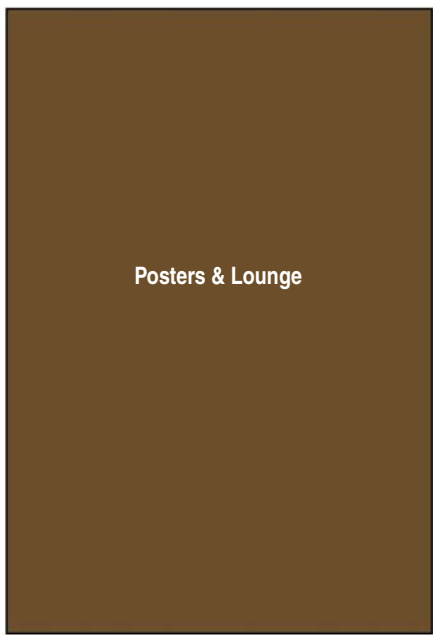


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- 835 Total Safety U.S., Inc.
- 837 ART Corporate Solutions, Inc.
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- 843 Bowen EHS, Inc.
- 845 Euro Safety & Health
- 849 CDC/NIOSH

Aisle 900

- 912 Phonak LLC
- 913 American Industrial Hygiene Association (AIHA*)
- 914 Hays Affinity Solutions
- 918 NuAire, Inc.
- 924 Kanomax USA, Inc.
- 925 Arizona Instrument, LLC
- 927 Medtox Laboratories
- 928 Columbia Analytical Services, Inc.
- 929 Labconco Corp.
- 934 PathCon Laboratories
- 935 Assay Technology, Inc./AT Labs/Miller Nelson (MNR)
- 936 NARDA Safety Test Solutions
- 941 RTI International

- 942 E.A.R., Inc.
- 943 Transamerica Retirement Management
- 944 Oregon OSHA
- 947 Fiberlock Technologies, Inc.

Aisle 1000

- 1024 Working Concepts, Inc.
- 1025 Silvent North America
- 1026 Kinetics Noise Control
- 1027 U.S. Dept. of Housing and Urban Development: Office of Healthy Homes and Lead Hazard Control
- 1028 Board of Certified Safety Professionals (BCSP)
- 1029 Liberty Mutual Insurance Co.
- 1034 Argus-Hazco
- 1035 CCOHS
- 1036 Redshift Technologies, Inc.
- 1037 Health Physics Society
- 1040 QuanTEM Laboratories, LLC.
- 1041 Critical Environment Technologies Canada Inc.
- 1042 MAXAIR Systems
- 1043 ERLAB, Inc.
- 1046 ESC Services, Inc.
- 1047 Air Force Recruiting
- 1049 Center for Toxicology and Environmental Health, LLC
- 1050 Mercury Instruments USA

Aisle 1100

- 1113 American Biological Safety Association
- 1115 American Society of Safety Engineers
- 1119 Alliant
- 1123 Gasmeter Technologies Inc.
- 1124 RJ Lee Group, Inc.
- 1126 A&B Labs
- 1127 CASELLA USA
- 1128 Nilfisk Industrial Vacuums
- 1134 Travelers Laboratory
- 1135 Sensidyne, LP
- 1136 Scientific Analytical Institute, Inc.
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- 1213 ABET, Inc.
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- 1219 Tiger-Vac Inc. (USA)
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- 1422 DCM Clean-Air Products, Inc.
- 1425 TSI, Inc.
- 1434 BGI Instruments
- 1435 Medgate, Inc.
- 1436 ProcessMAP Corporation
- 1437 Compliance Solutions
- 1440 IHS
- 1441 3E Company
- 1447 Open Range Software
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OptoSense, 1652
Phonak LLC, 912
ProcessMAP Corporation, 1436
Protective Industrial Products, Inc., 719
PureSafety, 1453
RAE Systems, 1719
Redshift Technologies, Inc., 1036
RKI Instruments, 1226
S.E. International, Inc., 1214
Scott Safety, 1626
Sensidyne, LP, 1135
Silvent North America, 1025
SiteHawk, 1335
Tiger-Vac Inc. (USA), 1219
Total Safety U.S., Inc., 835
TRS-Environmental, 637
Warwick Mills - TurtleSkin, 715
Working Concepts, Inc., 1024
Zefon International, 1943

Sampling, Analytical, and Laboratory Equipment

Aerobiology Laboratory Associates, Inc., 1947
AIHA Proficiency Analytical Testing Programs, LLC, 1148
Arizona Instrument, LLC, 925
Assay Technology, Inc./AT Labs/Miller Nelson (MNR), 935
Baseline-MOCON, 2051
BGI Instruments, 1434
Bios International Corporation, 1745
Columbia Analytical Services, Inc., 928
Critical Environment Technologies Canada Inc., 1041
EMLab P&K, 1646
EMSL Analytical, Inc., 1235
Entech Instruments, Inc., 727
ERLAB, Inc., 1043
Factory Direct Safety and Environmental Inc., 1845
Galson Laboratories, 735
Gasmot Technologies Inc., 1123
Gastec Corporation, 829
GfG Instrumentation, Inc., 1620
GrayWolf Sensing Solutions, 734
Grimm Technologies, Inc., 1615
Indoor Biotechnologies, Inc., 1542
Industrial Scientific Corporation, 1835
ION Science Americas LLC, 634
Kitagawa America, LLC, 1222
Mercury Instruments USA, 1050
Met One Instruments, Inc., 635
Morphix Technologies, 1851
Mycometer, Inc., 826
Nextteq, LLC, 1940
Norlab Calibration Gases, 716
NuAire, Inc., 918
NVL Laboratories, Inc., 824
Particle Measuring Systems, 537
Photovac, Inc., 1627
Prism Analytical Technologies, Inc. (PATI), 2046
Raeco Rents, 1314
RKI Instruments, 1226
SanAir Technologies Laboratory, Inc., 535
Sensidyne, LP, 1135
SKC, 1635
Thermo Scientific - Air Quality Instruments & Niton Analyzers, 1227
Travelers Laboratory, 1134
TRS-Environmental, 637
TSI, Inc., 1425
Zefon International, 1943

Special Products

ALS Laboratory Group (formerly DataChem Laboratories, Inc.), 1742, dietary supplement analysis, illicit drug analysis.

Advanced Calibration Designs, 1549, calibration gas generators
Air Systems International, 1619, emergency lighting
Air Technology Solutions of Delaware LLC, 1951, air purification system
Air Toxics Ltd., 1641, Home test kit
American Board of Industrial Hygiene, 725, promotion of industrial hygiene certification
BEAC, 1245, professional certification for EHS auditors
Complete Equity Markets, Inc., 1323, insurance services
DCM Clean-Air Products, Inc., 1422, dust collection
ERSI, 1141, demolition
ESC Services, Inc., 1046, lockout-tagout
Emilcott, 1318, greenlight environmental lighting system
Euro Safety & Health, 845, REACH OR
Fabenco, Inc., 1848, fall protection
GRAS Sound & Vibration, 1322, precision measurement microphones
Hays Affinity Solutions, 914, AIHA endorsed professional liability
Johns Hopkins Bloomberg School of Public Health, 2154, education/training
KMI, 1451, software
Kinetics Noise Control, 1026, noise control
MSDSonline, 1149, on demand software for incident management, employee training, MSDS Management
Masimo, 1421, pulse oximetry
Medgate, Inc., 1435, software
Mercury Instruments USA, 1050, mercury monitoring and analysis
Met One Instruments, Inc., 635, particle counters, aerosol monitors, air quality instruments for portable/hand held OEM and regulatory (PM10/PM2.5) applications
Midori Anzen Co. Ltd., 1749, antiviral, antimicrobial disposable facemask
Pinta Acoustic, Inc., 1143, noise control, sound control, acoustical materials
PortaGas, Inc., 1550, calibration gases and equipment
ProcessMAP Corporation, 1436, information management software
RTI International, 941, proficiency testing programs; asbestos standards; research & development
RightAnswer.com, 1415, chemical & regulatory information systems
Sensidyne, LP, 1135, vibration monitors
Showa Best Glove, Inc., 1540, hand/arm protection; gloves
SiteHawk, 1335, chemical inventories, MSDS authoring services

Spiramid, LLC, 1343, web-based enterprise EHS software
The University of Findlay, 2138, university degree programs
Tiger-Vac Inc. (USA), 1219, HEPA vacuums, explosion proof vacuums, dustless handheld tools
Total Safety U.S., Inc., 835, integrated safety solutions
Transamerica Retirement Management, 943, retirement services
Tulane University - CAEPH, 2151, distance learning degrees
Vital Technologies, Inc., 1854, food contact sanitizer, odor eliminator

Testing/Certification of Safety Products

AIHA Proficiency Analytical Testing Programs, LLC, 1148
ALS Laboratory Group (formerly DataChem Laboratories, Inc.), 1742
Assay Technology, Inc./AT Labs/Miller Nelson (MNR), 935
Columbia Analytical Services, Inc., 928
Forensic Analytical Laboratories, Inc., 1218
Kanomax USA, Inc., 924
Mercury Instruments USA, 1050
Olympus Innov-X, 1715
PureSafety, 1453
SanAir Technologies Laboratory, Inc., 535
Total Safety U.S., Inc., 835

Toxicology

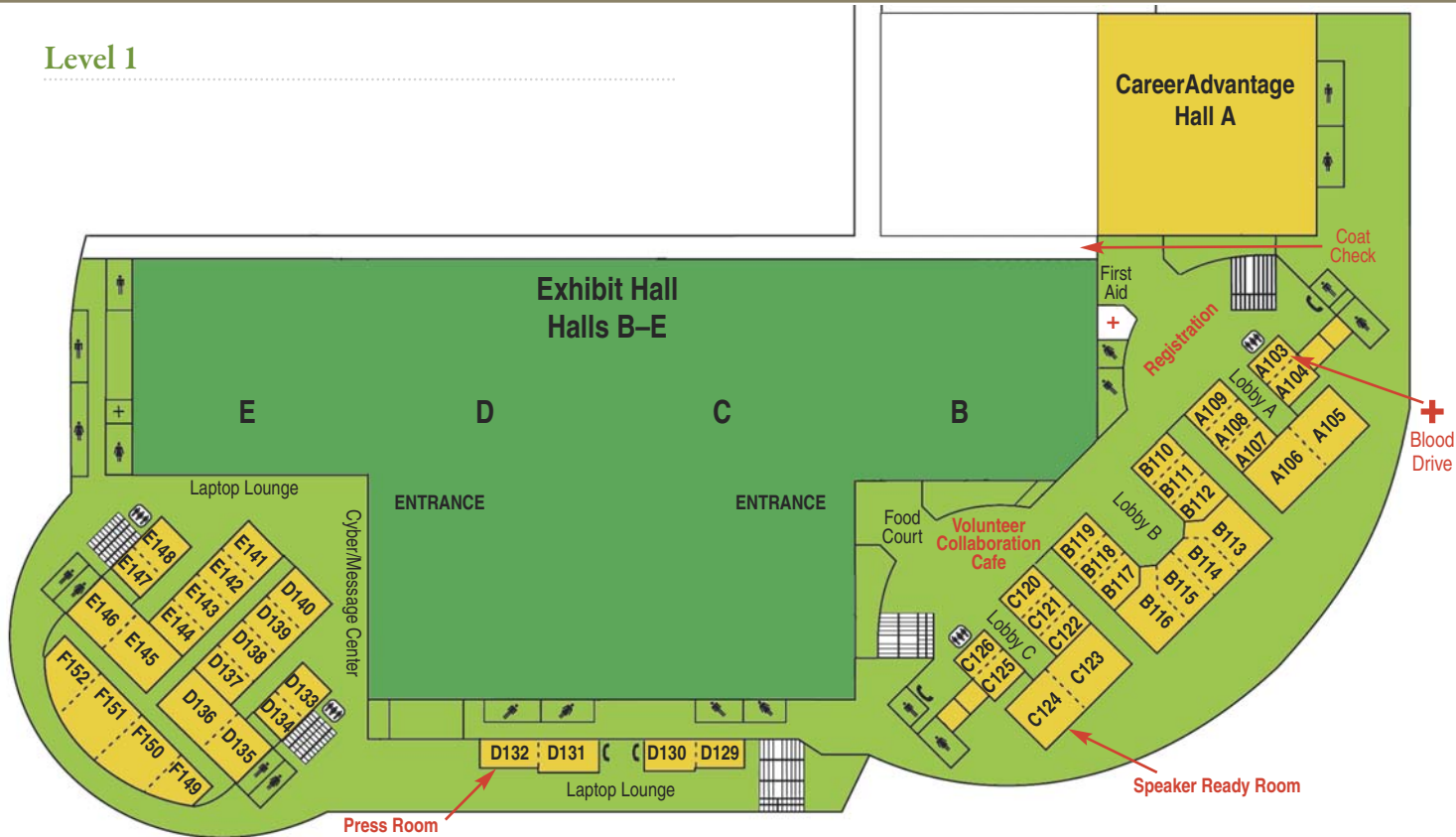
ACGIH®, 641
AMEC, 1419
CASELLA USA, 1127
Center for Research on Occupational & Environmental Toxicology (CROET) at OHSU, 2144
Center for Toxicology and Environmental Health, LLC, 1049
ChemWatch NA, 1354
Columbia Analytical Services, Inc., 928
ExPub/EBSCO, 1949
Johns Hopkins Bloomberg School of Public Health, 2154
Kanomax USA, Inc., 924
RightAnswer.com, 1415
University of California, Berkeley -School of Public Health, 2146
University of Washington - Environmental & Occupational Health Sciences, 2141

Ventilation

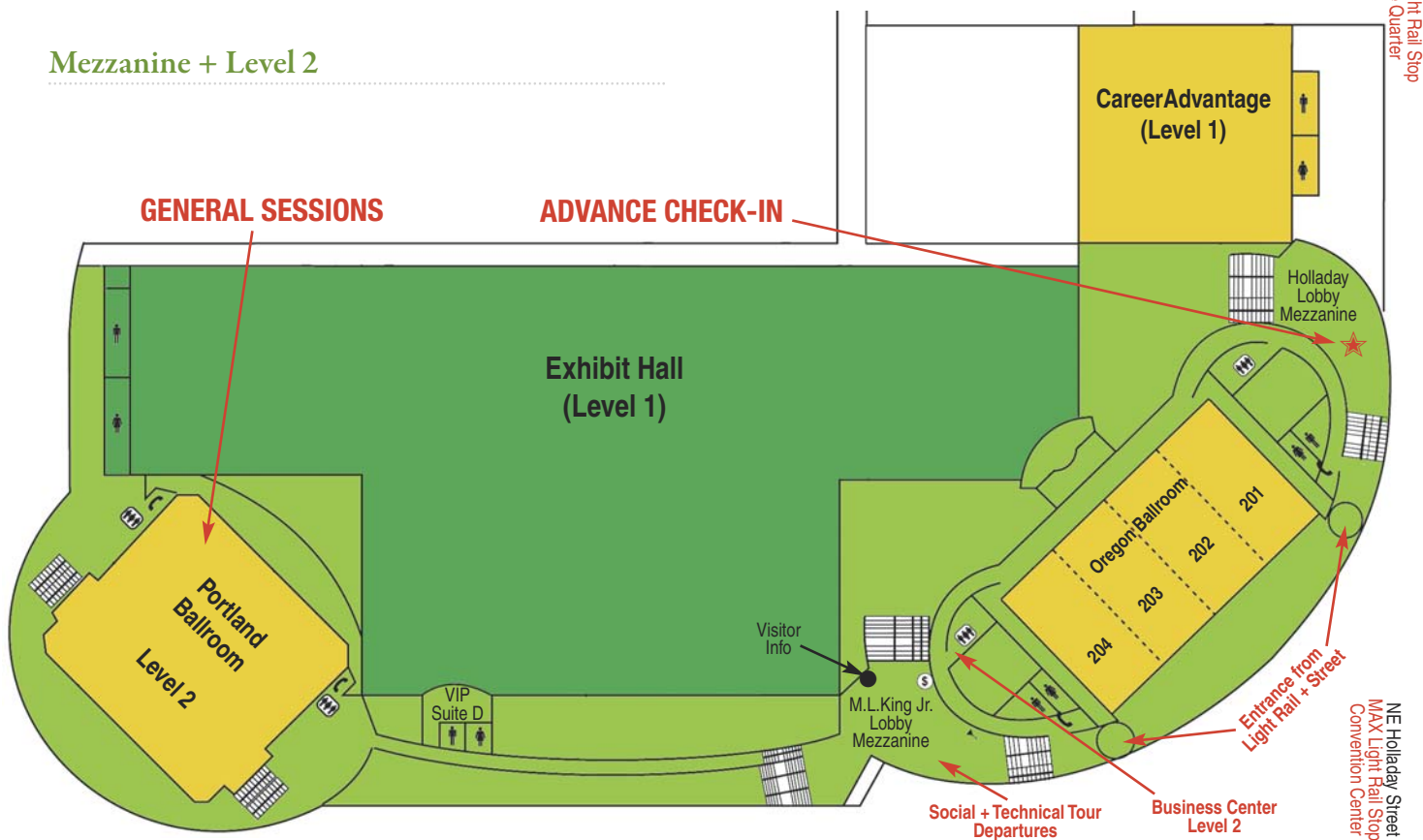
ACGIH®, 641
Air Systems International, 1619
Kanomax USA, Inc., 924
Kinetics Noise Control, 1026

+ Floor Plans: Oregon Convention Center

Level 1



Mezzanine + Level 2



+ Indices: Technical Program by Topic

Aerosol Technology

SS 001	Inhalable Particles: The State of the Science on a Big Particle Problem	Monday 2:30 p.m.–5:30 p.m.	46
PO 132	Aerosols	Thursday 8:00 a.m.–12:20 p.m.	86

Biosafety

PO 106	Biosafety and Environmental Microbiology I — Allergens, Fungi, and IEQ: What’s New?	Monday 2:00 p.m.–4:20 p.m.	41
RT 247	Emerging Issues with Bioaerosols in the Pacific Northwest	Thursday 8:00 a.m.–11:00 a.m.	84
RT 248	Environmental Biohazard Control of Multidrug Resistant Organisms	Thursday 8:00 a.m.–11:30 a.m.	85
PO 133	Biosafety and Environmental Microbiology II — Current Topics in Bioaerosols and Agricultural Health and Safety	Thursday 1:00 p.m.–3:00 p.m.	87

Communication and Training Methods

RT 204	Taking the Mystery Out of Mentoring: Practical Tools to Make a Real Difference	Monday 10:30 a.m.–12:30 p.m.	39
PO 110	Management and Training Issues: Communication	Monday 2:00 p.m.–5:00 p.m.	43
RT 243	Effective Adult SH&E Training Techniques: Some Tips and Lessons Learned	Wednesday 5:00 p.m.–7:30 p.m.	79

Computer Applications

RT 202	Essential Hazardous Materials and Emergency Response Resources and Tools for the IH	Monday 10:30 a.m.–12:30 p.m.	39
PO 115	Computer Applications	Tuesday 10:30 a.m.–12:50 p.m.	57
RT 238	Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy	Wednesday 1:00 p.m.–3:30 p.m.	75
RT 253	Leveraging ES&H Practice with the Latest Technology	Thursday 1:00 p.m.–3:30 p.m.	88

Confined Spaces

RT 255	Notable Confined Spaces	Thursday 1:00 p.m.–4:00 p.m.	88
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Construction

RT 203	Managing Moisture on Construction Sites	Monday 10:30 a.m.–12:30 p.m.	39
PO 108	General Topics in Occupational Safety	Monday 2:00 p.m.–4:40 p.m.	42
RT 217	Integrating Safety and Health into Green Construction: from Concept to Case Study	Tuesday 10:30 a.m.–12:30 p.m.	56
RT 223	Healthcare Construction: Moving Forward	Tuesday 2:00 p.m.–4:30 p.m.	60
RT 225	NFPA 70E — Understanding Requirements, Relationships and Responsibilities	Tuesday 2:00 p.m.–4:30 p.m.	61
RT 235	Effective Competent Persons for Illness and Injury Prevention Programs and OSHA Compliance	Wednesday 1:00 p.m.–3:30 p.m.	74
RT 251	Welding Health Effects, Exposures, and Exposure Reduction Controls	Thursday 8:00 a.m.–11:00 a.m.	84
RT 250	Prevention through Design — Construction and Noise	Thursday 8:00 a.m.–Noon	86

Consulting

RT 238	Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy	Wednesday 1:00 p.m.–3:30 p.m.	75
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Emergency Response

RT 202	Essential Hazardous Materials and Emergency Response Resources and Tools for the IH	Monday 10:30 a.m.–12:30 p.m.	39
RT 229	OSHA’S Response to the Deepwater Horizon Oil Spill	Tuesday 2:00 p.m.–6:00 p.m.	64
RT 249	NIOSH Response to the Deepwater Horizon Oil Spill	Thursday 8:00 a.m.–11:30 a.m.	85

Emerging Issues

RT 221	Addressing the Hazards of New and Emerging Issues within the Workplace	Tuesday 2:00 p.m.–4:30 p.m.	60
RT 236	Emerging Technologies and Industries: OSHA’s Approach, Activities, and Audience Exchange	Wednesday 1:00 p.m.–3:30 p.m.	75
	Emerging Issues Forum 1 — Specializing: Keeping Yourself Relevant in the Changing Market	Wednesday 1:30 p.m.–3:30 p.m.	78
	Emerging Issues Forum 2 — Personal Protective Technology Standards and Conformity Assessment	Thursday 8:00 a.m.–10:00 a.m.	83
RT 247	Emerging Issues with Bioaerosols in the Pacific Northwest	Thursday 8:00 a.m.–11:00 a.m.	84
RT 257	Diacetyl and Diacetyl Substitutes — Where Are We Now?	Thursday 1:00 p.m.–4:30 p.m.	89

Engineering

PO 107	Engineering and Control Technology	Monday 2:00 p.m.–4:40 p.m.	42
RT 241	OSHA’s I2P2: Should I Be Worried?	Wednesday 1:00 p.m.–4:00 p.m.	77
RT 250	Prevention through Design — Construction and Noise	Thursday 8:00 a.m.–Noon	86

Environmental Issues

CR 304	Using ISO Life Cycle Assessment Standards	Monday 2:00 p.m.–3:00 p.m.	41
CR 305	Consumer Product Toxicology	Monday 2:00 p.m.–3:00 p.m.	41
CR 307	Overview of Recent Substantive Federal Environmental, Health, and Safety Rulemaking	Monday 3:30 p.m.–4:30 p.m.	46
CR 312	Lessons Learned from Teaching Lead RRP and an Update on EPA’s Rule	Tuesday 2:00 p.m.–3:00 p.m.	60
CR 313	TSCA Regulatory Compliance: Challenges and Solutions	Tuesday 3:30 p.m.–4:30 p.m.	64
CR 314	Construction Noise — Managing Community Expectations	Wednesday 10:00 a.m.–11:00 a.m.	68
PO 123	Environmental Issues for Industrial Hygienists	Wednesday 10:00 a.m.–12:40 p.m.	72
CR 317	Acquisition to Integration as Part of a Management System	Wednesday 1:00 p.m.–2:00 p.m.	74
CR 320	EHS, Lean and Six Sigma	Wednesday 5:00 p.m.–6:00 p.m.	78
CR 323	Toxic Substance Control Act: Not Just Asbestos	Thursday 9:30 a.m.–10:30 a.m.	86

+ Indices: Technical Program by Topic

Ergonomics

PO 102	Ergonomics: Shoulders, Back and Lower Extremities.....	Monday 10:30 a.m.–12:30 p.m.	38
RT 224	International Ergonomic Analysis Tools and Standards: Beyond Our Borders	Tuesday 2:00 p.m.–4:30 p.m.	61
PO 134	Ergonomics: Upper Extremity Considerations and Methodological Approaches	Thursday 1:00 p.m.–3:20 p.m.	87

Exposure Assessment Strategies

PO 101	Asbestos Exposure Assessment Strategies	Monday 10:30 a.m.–12:30 p.m.	37
PO 103	Exposure Modeling Strategies	Monday 10:30 a.m.–12:30 p.m.	38
RT 207	Defining and Evaluating Data Quality	Monday 2:00 p.m.–4:30 p.m.	42
SS 001	Inhalable Particles: The State of the Science on a Big Particle Problem	Monday 2:30 p.m.–5:30 p.m.	46
RT 221	Addressing the Hazards of New and Emerging Issues within the Workplace	Tuesday 2:00 p.m.–4:30 p.m.	60
RT 228	NIOSH Health Hazard Evaluations: Results of Recent Industrial Hygiene Evaluations.....	Tuesday 2:00 p.m.–6:00 p.m.	64
PO 120	Alternate Exposure Assessment Strategies	Wednesday 10:00 a.m.–Noon	69
PO 121	Case Study Methodologies for Skin and Respiratory Exposures	Wednesday 10:00 a.m.–12:20 p.m.	71
SS 003	New Paradigms for Exposure and Risk Assessment: Taking Alternative Temporal Exposure Patterns to Task.....	Wednesday 1:00 p.m.–3:30 p.m.	76
RT 242	REACH is Here: How and Where its Impact Will be Felt by IH Professionals	Wednesday 1:00 p.m.–5:00 p.m.	78
RT 245	Health Hazard and Control Banding in the U.S. at a Crossroads: A Panel Discussion.....	Thursday 8:00 a.m.–10:30 a.m.	83
RT 257	Diacetyl and Diacetyl Substitutes — Where Are We Now?	Thursday 1:00 p.m.–4:30 p.m.	89

General Practice

RT 211	Glen Williamson Forum: OSHA's Most Interesting Health Cases, 2008–2010.....	Monday 2:00 p.m.–6:00 p.m.	44
PO 118	Industrial Hygiene General Practice	Tuesday 2:00 p.m.–6:00 p.m.	63
RT 231	American Board of Industrial Hygiene Forum	Wednesday 10:00 a.m.–Noon	70
RT 237	Making Changes: Embracing an Uncertain Future and Thriving.....	Wednesday 1:00 p.m.–3:30 p.m.	75

Green Track

RT 208	Building a Green Laboratory in the 21st Century	Monday 2:00 p.m.–5:00 p.m.	43
RT 217	Integrating Safety and Health into Green Construction: from Concept to Case Study.....	Tuesday 10:30 a.m.–12:30 p.m.	56
RT 226	Green Chemistry — Opportunities for the Industrial Hygienist.....	Tuesday 2:00 p.m.–5:00 p.m.	62

Health Care

RT 202	Essential Hazardous Materials and Emergency Response Resources and Tools for the IH.....	Monday 10:30 a.m.–12:30 p.m.	39
RT 203	Managing Moisture on Construction Sites	Monday 10:30 a.m.–12:30 p.m.	39
PO 112	Healthcare Industries I: Exposure Assessment and Control.....	Tuesday 10:30 a.m.–12:30 p.m.	54
RT 223	Healthcare Construction: Moving Forward	Tuesday 2:00 p.m.–4:30 p.m.	60
PO 125	Healthcare Industries II: Construction, PPE and Other Topics	Wednesday 1:00 p.m.–3:20 p.m.	74
RT 244	Hazardous Drugs in Healthcare - State of the Science and Emerging Issues.....	Wednesday 5:00 p.m.–7:30 p.m.	80
RT 248	Environmental Biohazard Control of Multidrug Resistant Organisms	Thursday 8:00 a.m.–11:30 a.m.	85
RT 256	Respiratory Protection in Healthcare: Changing Standards and Best Practices	Thursday 1:00 p.m.–4:30 p.m.	89

Indoor Environmental Quality

PO 106	Biosafety and Environmental Microbiology I — Allergens, Fungi, and IEQ: What's New?.....	Monday 2:00 p.m.–4:20 p.m.	41
RT 216	Federal Environmental Lead Programs Update.....	Tuesday 10:30 a.m.–12:30 p.m.	55
PO 117	Indoor Environmental Quality I.....	Tuesday 2:00 p.m.–5:20 p.m.	62
RT 239	10 Years Later: What Have We Learned from the WTC Attacks?.....	Wednesday 1:00 p.m.–4:00 p.m.	77
PO 130	Indoor Environmental Quality II.....	Thursday 8:00 a.m.–10:20 a.m.	83

Interactive Learning Track

Luncheon Discussions — Students and Early Career Professionals		Monday 12:30 p.m.–1:30 p.m.	40
Luncheon Discussions — NIOSH Table Talks		Tuesday 12:30 p.m.–1:30 p.m.	58
Luncheon Discussions — Volunteer Group “Tech Talks”		Wednesday Noon–1:00 p.m.	73
Unsolved IH Mysteries Workshops		Mon.–Wed. 12:30 p.m.–2:00 p.m.	40, 59, 74

International Issues

RT 213	Occupational Exposure Limits: Global and Domestic Perspectives from Across the Field.....	Monday 2:00 p.m.–6:00 p.m.	45
RT 224	International Ergonomic Analysis Tools and Standards: Beyond Our Borders	Tuesday 2:00 p.m.–4:30 p.m.	61
RT 227	Integrated Solutions in Sustainable Occupational Health and Safety Management Systems	Tuesday 2:00 p.m.–6:00 p.m.	63
PO 122	International Globalization.....	Wednesday 10:00 a.m.–12:20 p.m.	71

Ionizing Radiation

RT 218	Managing Radiation Surprises and a Memorial Tribute to Dr. Herman Cember.....	Tuesday 10:30 a.m.–12:30 p.m.	56
PO 119	All Things Radiation	Wednesday 10:00 a.m.–Noon	68

Lab Health and Safety

PO 105	Laboratory Health and Safety	Monday 10:30 a.m.–12:10 p.m.	37
RT 208	Building a Green Laboratory in the 21st Century	Monday 2:00 p.m.–5:00 p.m.	43

Law, Regulations, Standards and Guidelines

RT 213	Occupational Exposure Limits: Global and Domestic Perspectives from Across the Field.....	Monday 2:00 p.m.–6:00 p.m.....	45
RT 214	OSHA's Injury and Illness Prevention Program Rulemaking.....	Monday 2:00 p.m.–6:00 p.m.....	45
RT 236	Emerging Technologies and Industries: OSHA's Approach, Activities, and Audience Exchange.....	Wednesday 1:00 p.m.–3:30 p.m.....	75
RT 254	The GHS is Coming — Will You Be Ready?.....	Thursday 1:00 p.m.–4:00 p.m.....	88

Lectures

Jefferey S. Lee Lecture.....	Monday 1:00 p.m.–2:00 p.m.....	41
11th Annual Upton Sinclair Memorial Lecture for Outstanding EHS Investigative Reporting.....	Tuesday 10:30 a.m.–11:30 a.m.....	54
William P. Yant Award Lecture.....	Tuesday 12:30 p.m.–1:30 p.m.....	59
Donald E. Cummings Award Lecture.....	Wednesday 12:30 p.m.–1:30 p.m.....	73
Herbert E. Stokinger Award Lecture.....	Thursday 12:30 p.m.–1:30 p.m.....	87

Management

RT 206	AIHA* Value Strategy Session on Case Studies.....	Monday 10:30 a.m.–1:00 p.m.....	40
PO 110	Management and Training Issues: Communication.....	Monday 2:00 p.m.–5:00 p.m.....	43
RT 214	OSHA's Injury and Illness Prevention Program Rulemaking.....	Monday 2:00 p.m.–6:00 p.m.....	45
RT 227	Integrated Solutions in Sustainable Occupational Health and Safety Management Systems.....	Tuesday 2:00 p.m.–6:00 p.m.....	63
RT 232	Ethical Decision-Making in Sustainability and Management Systems.....	Wednesday 10:00 a.m.–Noon.....	70
RT 238	Using Computer Applications to Demonstrate the IH Business Case as Part of the Value Strategy.....	Wednesday 1:00 p.m.–3:30 p.m.....	75

Mold

PO 106	Biosafety and Environmental Microbiology I — Allergens, Fungi, and IEQ: What's New?.....	Monday 2:00 p.m.–4:20 p.m.....	41
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Nanotechnology

RT 205	US Chemical and Occupational Health Regulation and Policy for Engineered Nanomaterials.....	Monday 10:30 a.m.–12:30 p.m.....	40
RT 212	Nanotechnology: Advances in Medical Surveillance and Occupational Health.....	Monday 2:00 p.m.–6:00 p.m.....	45
RT 215	Ask the Expert: An Update on the NIOSH Nanotechnology Research Program.....	Tuesday 10:30 a.m.–12:30 p.m.....	55
RT 234	Risk Assessment Applied to Engineered Nanomaterials: Managing Risk with Limited Data.....	Wednesday 10:00 a.m.–Noon.....	71
PO 129	Nanotechnology: Assessment and Control.....	Wednesday 5:00 p.m.–7:00 p.m.....	79

Noise

PO 104	Noise Protection, Training, Measurement and Reduction.....	Monday 10:30 a.m.–12:30 p.m.....	38
RT 209	Environmental Noise: 35 Years and Counting — Implications for Industrial Hygiene.....	Monday 2:00 p.m.–5:00 p.m.....	44
RT 222	Fit Testing Hearing Protection Devices: Technology, Application, and Implementation.....	Tuesday 2:00 p.m.–4:30 p.m.....	60
RT 250	Prevention through Design — Construction and Noise.....	Thursday 8:00 a.m.–Noon.....	86

Nonionizing Radiation

RT 201	Case Studies on Nonionizing Radiation.....	Monday 10:30 a.m.–12:30 p.m.....	38
PO 119	All Things Radiation.....	Wednesday 10:00 a.m.–Noon.....	68

Occupational Epidemiology

RT 212	Nanotechnology: Advances in Medical Surveillance and Occupational Health.....	Monday 2:00 p.m.–6:00 p.m.....	45
SS 002	Emerging Exposure Assessment Methods for Occupational Epidemiology Studies.....	Tuesday 2:00 p.m.–4:30 p.m.....	61
PO 126	Reconstruction of Exposures: Methods and Application.....	Wednesday 1:00 p.m.–3:40 p.m.....	76

Occupational Medicine

RT 256	Respiratory Protection in Healthcare: Changing Standards and Best Practices.....	Thursday 1:00 p.m.–4:30 p.m.....	89
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Protective Clothing and Equipment

PO 114	Personal Protective Clothing and Equipment.....	Tuesday 10:30 a.m.–12:50 p.m.....	57
RT 240	The NIOSH Personal Protective Technologies Program.....	Wednesday 1:00 p.m.–4:00 p.m.....	77
Emerging Issues Forum 2 — Personal Protective Technology Standards and Conformity Assessment.....	Thursday 8:00 a.m.–10:00 a.m.....	83	

Real-time Detection Systems

PO 111	Field Detection, Sampling and Analysis: Real Time Detection Systems.....	Tuesday 10:30 a.m.–12:30 p.m.....	54
RT 252	Field-Portable and Mobile Analysis and Testing: Developing and Documenting Competencies.....	Thursday 1:00 p.m.–3:30 p.m.....	88

Respiratory Protection

RT 210	Living with Differences: Addressing Standards for Respirator Selection/Use Worldwide.....	Monday 2:00 p.m.–5:00 p.m.....	44
PO 116	Respiratory Protection I.....	Tuesday 2:00 p.m.–5:00 p.m.....	62
PO 124	Respiratory Protection II.....	Wednesday 10:00 a.m.–12:40 p.m.....	72
RT 240	The NIOSH Personal Protective Technologies Program.....	Wednesday 1:00 p.m.–4:00 p.m.....	77
RT 256	Respiratory Protection in Healthcare: Changing Standards and Best Practices.....	Thursday 1:00 p.m.–4:30 p.m.....	89

+ Indices: Technical Program by Topic

Risk Assessment

RT 202	Essential Hazardous Materials and Emergency Response Resources and Tools for the IH.....	Monday 10:30 a.m.–12:30 p.m.	39
PO 109	Risk Assessment — Case Studies.....	Monday 2:00 p.m.–5:00 p.m.	43
PO 113	Risk Management — Planning and Prevention.....	Tuesday 10:30 a.m.–12:30 p.m.	55
RT 219	Today’s Global Chemical Regulatory Shifts: Are We Leading or Following?.....	Tuesday 10:30 a.m.–12:30 p.m.	56
RT 221	Addressing the Hazards of New and Emerging Issues within the Workplace.....	Tuesday 2:00 p.m.–4:30 p.m.	60
RT 234	Risk Assessment Applied to Engineered Nanomaterials: Managing Risk with Limited Data....	Wednesday 10:00 a.m.–Noon	71
SS 003	New Paradigms for Exposure and Risk Assessment: Taking Alternative Temporal Exposure Patterns to Task.....	Wednesday 1:00 p.m.–3:30 p.m.	76
PO 128	Risk Assessment — Methods and Applications	Wednesday 5:00 p.m.–7:00 p.m.	79

Safety

CR 301	Changing a Safety Culture: How Leadership and Front-Line Think.....	Monday 10:30 a.m.–11:30 a.m.	37
CR 302	Conflict Management and Resolution for Safety Professionals.....	Monday 10:30 a.m.–11:30 a.m.	37
CR 303	Dust Explosion Hazard Assessment — Including OSHA Combustible Dust National Emphasis Program	Monday 11:30 a.m.–12:30 p.m.	40
PO 108	General Topics in Occupational Safety	Monday 2:00 p.m.–4:40 p.m.	42
CR 306	Emergency Management and EHS: We’ve Come a Long Way in 10 Years.....	Monday 3:30 p.m.–4:30 p.m.	46
CR 308	Hazardous Materials Shipping And Transportation	Tuesday 10:30 a.m.–11:30 a.m.	54
CR 309	Safety Culture: Motivation and Influence	Tuesday 10:30 a.m.–11:30 a.m.	54
CR 310	OSHA Construction and General Industry Standards: Why You Need to Understand Both ..	Tuesday 11:30 a.m.–12:30 p.m.	58
CR 311	Culture and Exposure Control.....	Tuesday 2:00 p.m.–3:00 p.m.	60
RT 225	NFPA 70E — Understanding Requirements, Relationships and Responsibilities.....	Tuesday 2:00 p.m.–4:30 p.m.	61
CR 315	OSHA Local and National Emphasis Program Inspections — How Companies Can Get Prepared	Wednesday 10:00 a.m.–11:00 a.m.	68
CR 316	PSM, RMP and CalARP Update and Resources for Employers.....	Wednesday 11:30 a.m.–12:30 p.m.	72
CR 318	Utilizing ANSI B11 for Machine Guarding Risk Assessment: Achieving Acceptable Risk.....	Wednesday 1:00 p.m.–2:00 p.m.	74
RT 241	OSHA’s I2P2: Should I be Worried?.....	Wednesday 1:00 p.m.–4:00 p.m.	77
CR 319	Slip Simulator Training — Slip-Trip-Fall Prevention	Wednesday 2:30 p.m.–3:30 p.m.	78
CR 321	The Aging Workforce: Occupational Safety, Health, Hygiene and Wellness Considerations ...	Wednesday 5:00 p.m.–6:00 p.m.	78
CR 322	Effective Operational EHS Metrics Reviews: Rhythms, Processes and Driving Results	Thursday 8:00 a.m.–9:00 a.m.	83
CR 324	Accountability and Discipline in Safety: A Complementary Approach	Thursday 1:00 p.m.–2:00 p.m.	87
CR 325	How to Develop and Sustain an Effective Accident Investigation Program	Thursday 2:30 p.m.–3:30 p.m.	89

Sampling and Lab Analysis

RT 216	Federal Environmental Lead Programs Update.....	Tuesday 10:30 a.m.–12:30 p.m.	55
PO 127	New Issues in Biological and Chemical Sampling and Analysis.....	Wednesday 1:00 p.m.–4:00 p.m.	76
RT 246	Sampling Strategies in Unusual IH Exposures	Thursday 8:00 a.m.–10:30 a.m.	84

Science Symposia

SS 001	Inhalable Particles: The State of the Science on a Big Particle Problem	Monday 2:30 p.m.–5:30 p.m.	46
SS 002	Emerging Exposure Assessment Methods for Occupational Epidemiology Studies.....	Tuesday 2:00 p.m.–4:30 p.m.	61
SS 003	New Paradigms for Exposure and Risk Assessment: Taking Alternative Temporal Exposure Patterns to Task.....	Wednesday 1:00 p.m.–3:30 p.m.	76

Social Concerns

RT 230	A Conceptual Discussion on Safety and Health and Implications for the Workplace	Wednesday 10:00 a.m.–Noon	70
PO 131	Community Environmental Health.....	Thursday 8:00 a.m.–11:20 a.m.	84

Stewardship and Sustainability

RT 206	AIHA* Value Strategy Session on Case Studies.....	Monday 10:30 a.m.–1:00 p.m.	40
RT 226	Green Chemistry — Opportunities for the Industrial Hygienist.....	Tuesday 2:00 p.m.–5:00 p.m.	62
RT 232	Ethical Decision-Making in Sustainability and Management Systems.....	Wednesday 10:00 a.m.–Noon	70
RT 233	Incorporating Life Cycle Analysis in Business: Opportunities for the EHS Professional.....	Wednesday 10:00 a.m.–Noon	70
RT 242	REACH is Here: How and Where its Impact Will be Felt by IH Professionals	Wednesday 1:00 p.m.–5:00 p.m.	78
RT 254	The GHS is Coming — Will You Be Ready?.....	Thursday 1:00 p.m.–4:00 p.m.	88

Student and Early Career Professionals

RT 204	Taking the Mystery Out of Mentoring: Practical Tools to Make a Real Difference	Monday 10:30 a.m.–12:30 p.m.	39
Luncheon	Discussions — Students and Early Career Professionals	Monday 12:30 p.m.–1:30 p.m.	40
RT 220	Perspectives on Preparation for the CIH Exam — Version 5.0	Tuesday 10:30 a.m.–1:00 p.m.	57
RT 237	Making Changes: Embracing an Uncertain Future and Thriving.....	Wednesday 1:00 p.m.–3:30 p.m.	75

Toxicology

PO 118	Industrial Hygiene General Practice	Tuesday 2:00 p.m.–6:00 p.m.	63
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