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MAY 18-23

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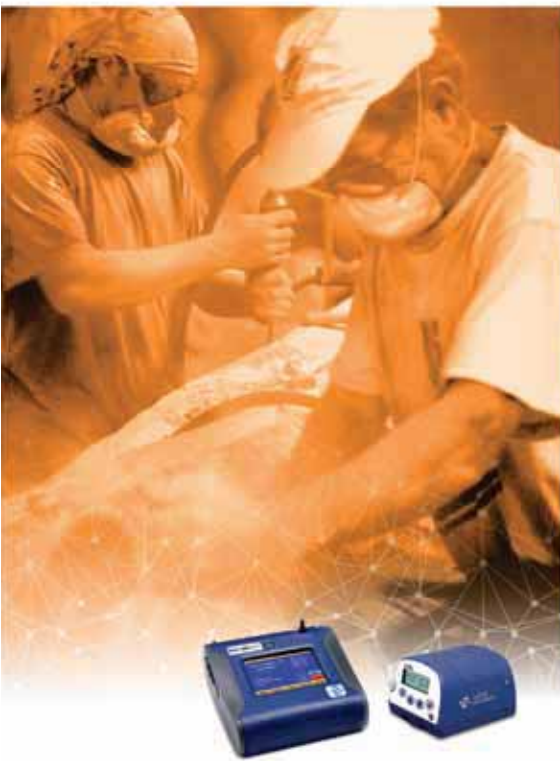
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JOIN THE CONVERSATION!

CONNECT WITH US ON SOCIAL MEDIA AND TELL US WHAT YOU'RE LEARNING, DOING AND EXPERIENCING AT AIHce 2013!

FIND US ON:



AIHce



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DON'T FORGET TO USE HASHTAG #AIHCE ON TWITTER

Bonjour!

Get ready for a week of interactive and thought-provoking sessions that will leave you equipped with ideas and solutions to bring back and apply immediately to your work.

AIHce 2013 gives you the opportunity to step back from your day-to-day tasks and focus on your most important asset — you.

Learn from some of the best minds in occupational and environmental health and safety, network with your peers, and enjoy all that Montreal has to offer!

Enjoy your week!

HAVE QUESTIONS?

STOP BY THE INFO KIOSK OR ASK ANY AIHA STAFF MEMBER FOR ASSISTANCE.

Stay Connected with the AIHce 2013 Mobile App!



Keep AIHce at your fingertips with the AIHce 2013 mobile app! Create and manage your schedule, view detailed session and exhibitor listings, and stay informed about the latest AIHce happenings — all from the convenience of your smartphone or tablet.






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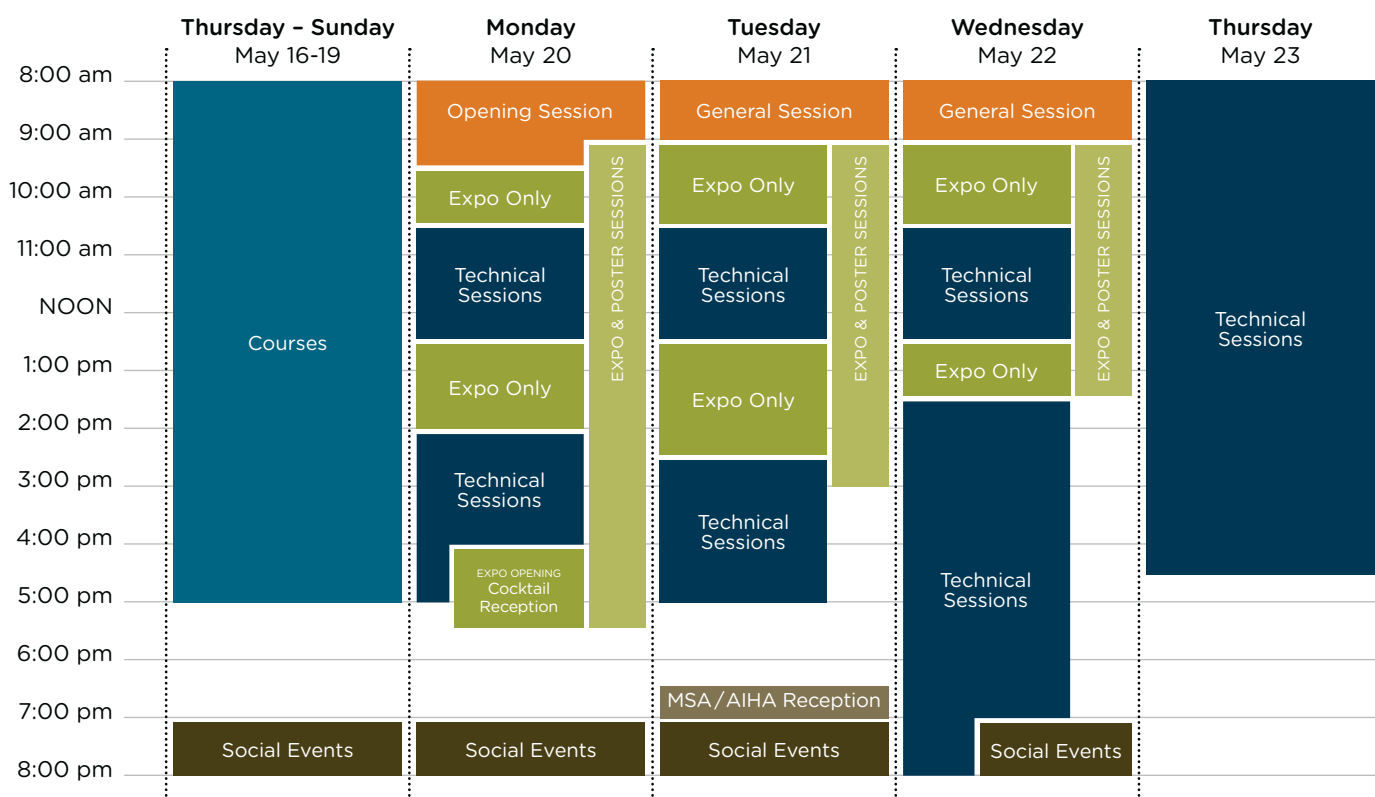
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AIHce at a Glance



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THANK YOU ...

TO THE FOLLOWING VOLUNTEERS FOR THEIR TIME
AND EXPERTISE IN ASSEMBLING THE 2013 PROGRAM.

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



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General Information

AIHce 2013 is headquartered at the Palais des congrès de Montréal (Palais). Education sessions, the Expo and most volunteer group meetings are scheduled at the Palais. For convenience, the Expo is located on Level 2 and all education sessions are scheduled on Level 5. Social activities will be held at the Le Centre Sheraton Hotel.

AIHce Information

Palais, Viger Hall

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

Palais Concierge

Palais, Viger Hall

Looking for a restaurant? Want information on the city of Montreal? Visit the concierge for assistance.

AIHce On Demand

Palais, Viger Hall

Reach your educational goals using conference recordings from AIHce 2013. AIHce On Demand offers the following, available online 24/7:

- Presentation slides synched to audio recordings
- Downloadable MP3 files
- Up to 300 hours of recorded educational content

Stop by the AIHce On Demand counter and purchase the complete library of sessions*. Pay just \$75 through the end of the conference. Don't delay, after AIHce, the price increases to \$195.

*If you registered at the Best Value rate in advance, AIHce On Demand is included – no need to purchase!

AIHce On Demand is

brought to you
by Scott Safety



Guests

All accompanying registered spouses and guests are invited to attend the *Bienvenue Montreal* Welcome Brunch (ticket required) on Monday at 10:00 a.m. at the Sheraton. See who is attending AIHce and meet old friends at this annual event. Hear what Montreal has to offer and get tips on what to do, what to see and where to eat in this charming city.

Make your week in Montreal memorable by signing up for one of the Social Tours. The tours are open to all registrants while seats last!

AIHce 2013 Expo

Palais, Level 200

- 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 250 exhibits, relax, dine and meet with colleagues. Each day features Expo-only hours affording time in the Expo between sessions.

- AIHA® and ACGIH® exhibits
- Expo Theater
- Cafe & Croissants on Tuesday
- Clandestine Drug Lab Exhibit
- Expo Opening Cocktail Reception – don't forget your drink ticket
- Passport to Prizes
- Cyber Cafe + Networking Lounges
- Web and Software Showcase
- University Row
- Poster Sessions
- SECP Table Topics and NIOSH Tech Talks
- Restaurants

Poster Sessions

Palais, Expo

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. Student authors present on Wednesday followed by the Student Awards Ceremony at 12:30 p.m. See page 69.

Table Topics and Tech Talks

Join a conversation group facilitated by AIHA Members and NIOSH staff. Discussions focus on current issues, relevant topics and research. Purchase lunch from a concession and choose a topic. Seating is limited first-come, first-served.

- **Students and Early Career Professionals (SECP) Table Topics**
Monday, 1:00 p.m.–2:00 p.m.
Designed for Students and Early Career Professionals, AIHA members lead discussions on research, career goals, CIH certification, and more.
- **NIOSH Tech Talks: Current Topics**
Tuesday, 12:30 p.m.–1:30 p.m.
Facilitated by NIOSH researchers, discussions focus on high-interest topics in research and technical content.

AIHce Pin

Add bling to your badge and support the AIHF by purchasing the AIHce 2013 pin at Registration or the AIHA Booth.



27th Annual AIHF Fun Run/Walk

Tuesday, 6:30 a.m.–8:00 a.m.

Lace up your running shoes and support the work of the AIHF. Run 5K or walk 2K – all are welcome! All participants must check-in at the Fun Run/Walk desk to sign a waiver by 5:30 p.m. on Monday. Check-in or new registrations at the race site are not permitted. The fee is \$40.

Sponsored by
HygieneTech



HYGIENETECH

First Time Attending?

Join us for an AIHce orientation.

Sunday, 5:30 p.m.–6:30 p.m. | Palais, 710a

- Meet other first-time conference-goers
- Discover the best networking events that can lead to meeting valuable contacts
- Hear tips on how to maximize your overall conference experience

Complimentary WiFi

Password: AIHCE2013

Wireless Internet access is available throughout the Palais. Complete session evaluations, stay on top of work and keep in touch through email.

Coat and Luggage Check

Palais, Viger Hall

Services are offered Wednesday and Thursday. Items may be left at the discretion of the owner; AIHce is not liable for lost articles. Please do not check valuables. \$5 per person.

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 at no cost.

Cyber Centers

Complete session evaluations, see who is registered for AIHce or peruse the AIHce website. Complimentary internet access is available throughout the Palais. Terminals are located in Viger Hall, the Expo and on Level 5.

Sponsored by Scientific
Analytical Institute, Inc.



General Information

Registration

Palais, Viger Hall

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

To register as a member, individuals must have satisfied all the requirements of membership and paid 2013 dues in full prior to AIHce.

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

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

Lanyards provided by Sensidyne.



Courses

All courses are located in the Palais. To access electronic handouts go to www.aiha.org/eMats. Need assistance? Please stop by the Speaker Ready Room.

PDC Luncheons

For your convenience, a boxed lunch is included with all courses. Lunch will be served Noon-1:00 p.m. in room 710 (Level 7). Ticket required.

Fellow Ribbons

AIHA Fellows, please pick up a ribbon at the AIHce Information Kiosk. Thank you!

First Aid and Assistance

Palais, 340

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

Lost and Found

Information Kiosk, Viger Hall

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

MSA/AIHA® Reception

Everyone who is anyone will be at this must-attend annual event held on Tuesday at 6:30 p.m., at the Le Centre Sheraton.

Jointly sponsored by
MSA and AIHA®



Speaker Ready Room

Palais, 516c

Saturday–Sunday	7:00 a.m.–5:30 p.m.
Monday–Wednesday	7:30 a.m.–5:30 p.m. (6:30 p.m. on Wednesday)
Thursday	7:30 a.m.–4:30 p.m.

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

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

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

Course instructors are welcome to use the Ready Room, but not required to check in. AIHA does not provide computers to course instructors.

Technical and Social Tours

Depart the Palais, Viger Street

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

Volunteer Red Carpet Club

Palais, 512g

Monday–Wednesday,
9:00 a.m.–4:00 p.m.

AIHA loves its volunteers, both national and local! To show its appreciation, AIHA is providing an exclusive members-only lounge for all AIHA volunteers to enjoy.

Where to Eat?

Restaurants in the Expo are open Monday through Wednesday and serve a variety of options. An expansive mall is located under the Palais and offers a variety of quick lunch options. Many wonderful restaurants are just a short walk from the Palais; check with the concierge for recommendations.

Thank You, AIHce Sponsors

AIHce wishes to thank the sponsors of various events and activities. For a list of this year's supporters, see page 73.

Educational Transcripts/ Attendance and Certification Documentation

- Full attendance and participation is required; partial credits will not be awarded.
- Details on all certification information and contact hours will be available via educational transcripts on **August 5, 2013**.
- Educational transcripts are free and available 24/7 at www.aiha.org/EduTranscript
- Presenters, co-presenters, authors of oral, abstracts, technical sessions and poster presentations:
 - Are responsible for retaining all documentation for reference and/or certification audits
 - Certification information and contact hours will NOT appear on their transcripts.
 - MUST retain one of the following: the web posting, advance program, or final program, reflecting their role.
- Questions contact: Erin Breece, Coordinator, Learning Programs ebreece@aiha.org.

Certification Information

Go to www.AIHce2013.org for complete information on credits* and/or contact hours for maintaining certifications (U.S., Canadian, and International).



BCRSP



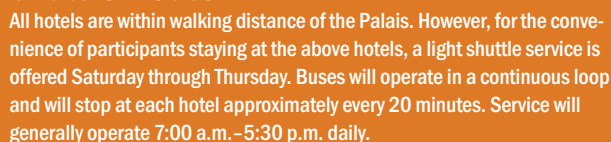
Don't Forget to Complete Your Evaluation!

There are many ways to evaluate the AIHce technical sessions! Use your smartphone, laptop, iPad or other mobile device or the cyber center computers to access the evaluations through the Mobile App.

- The AIHce Mobile App. Visit <http://m.core-apps.com/aihce2013> or scan the QR code

Questions? Visit the Speaker Ready Room, Palais, 516c

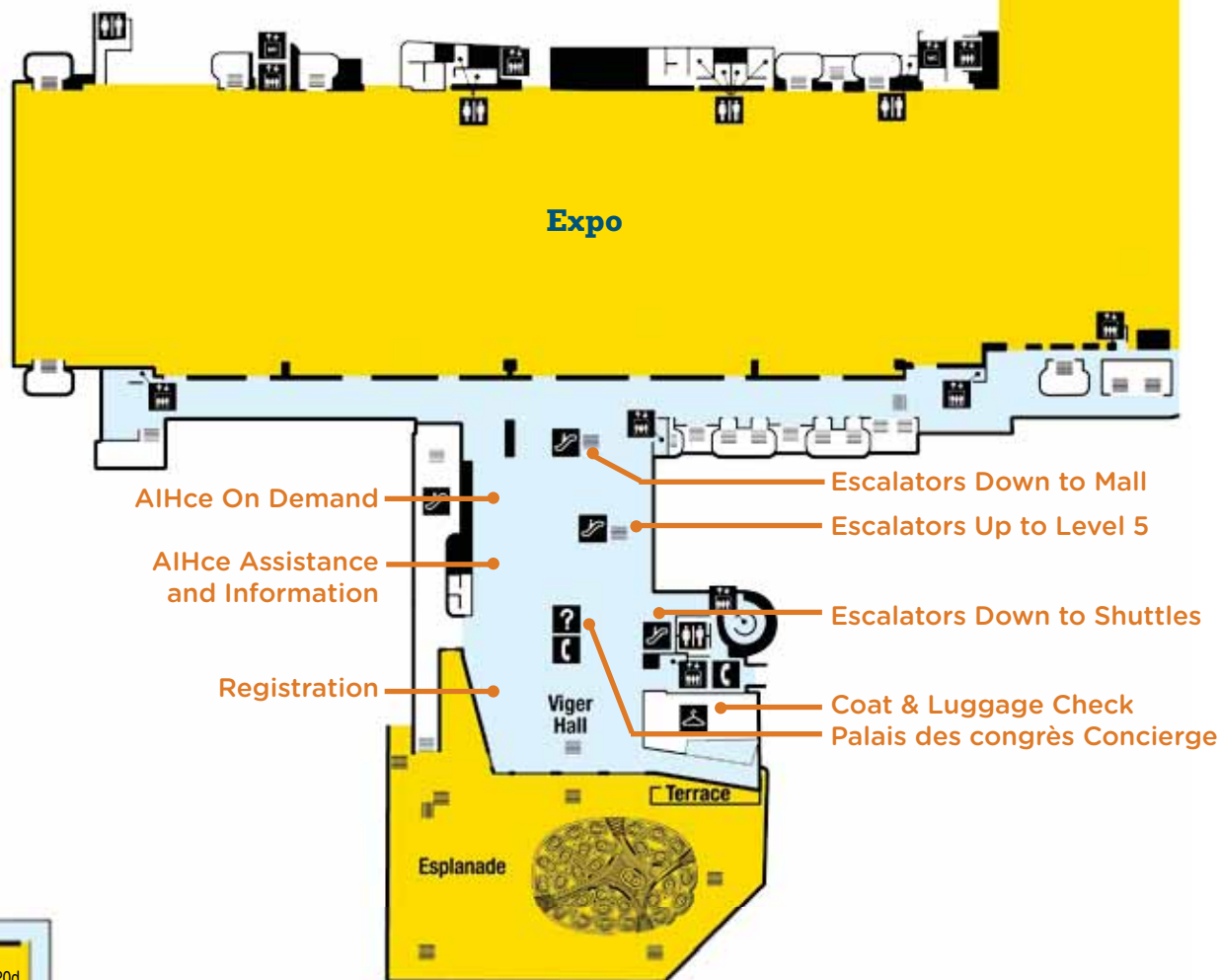
Stop #1 – Le Centre Sheraton
Stop #2 – The Marriott Chateau Champlain
 (Hilton Montreal Bonaventure walk to Marriott)
Stop #3 – Fairmont. The Queen Elizabeth



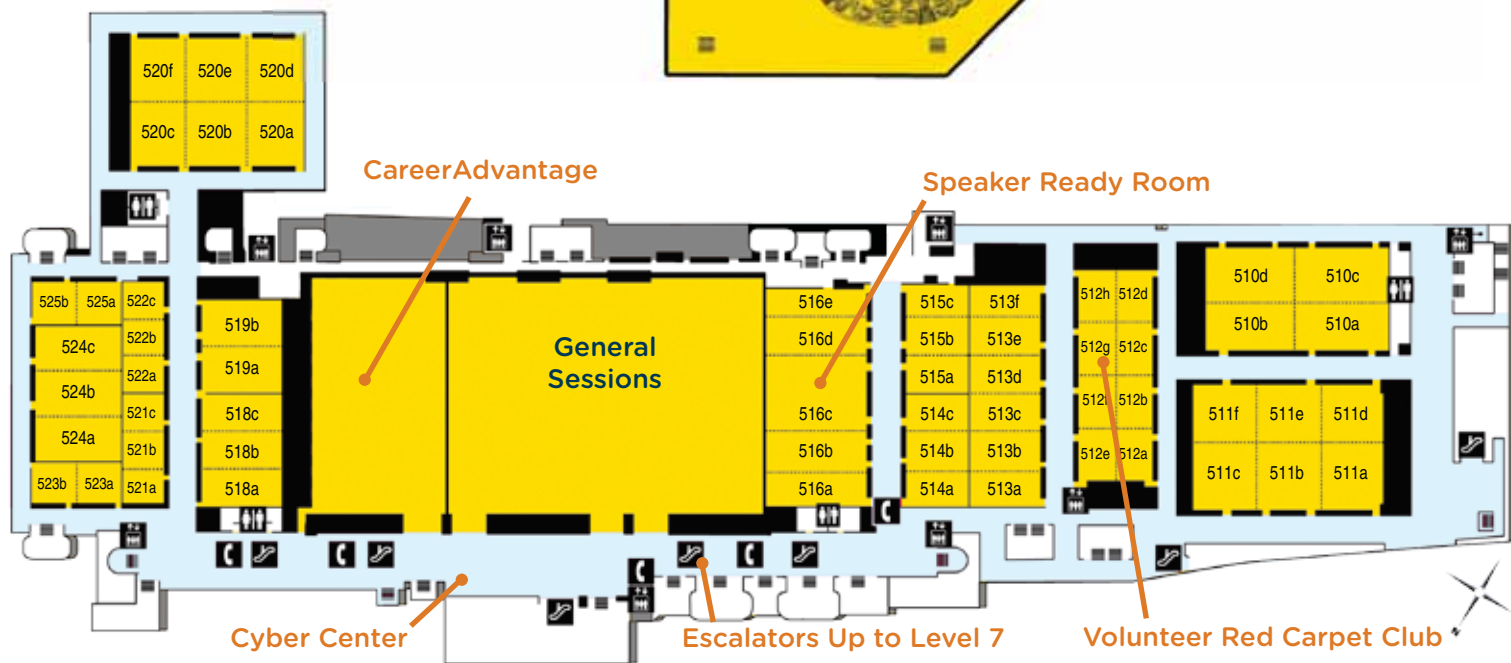
- 7 **Hyatt Regency Montreal**
1255 Rue Jeanne-Mance
2 block walk to Palais
- 8 **Intercontinental Montreal**
360 Rue Saint-Antoine Ouest
Across street from Palais
- 9 **Hotel Le Dauphin Montreal**
1025 Rue de Bleury
1 block walk to Palais
- 10 **Marriott Chateau Champlain Montreal**
1050 Rue de la Gauchetière Ouest
10 min shuttle to Palais
- 11 **Marriott Springhill Suites Old Montreal**
445 Rue Saint-Jean-Baptiste
3 block walk to Palais
- 12 **Le Westin Montreal**
270 Rue Saint-Antoine Ouest
Across street from Palais

Palais des congrès de montréal

Level 2



Level 5



Technical Tours

Board bus fifteen minutes prior to scheduled departure from the Palais, Viger Street, Lower Level.



Diversify your conference experience by participating in a Technical Tour. Led by a practicing industrial hygienist or safety expert, explore IH issues in a real-life learning environment. Participation in the tours is limited to professional registrants. Tickets are \$55 each; purchase at registration. Tickets are nonrefundable.

Tuesday, May 21



9:30 a.m.-12:30 p.m. TT-01 McGill University Hazardous Waste Management Transfer Centre

As a major research institution and medical school, McGill University has

the challenge of dealing with a diversity of hazardous wastes, including chemical, biomedical and radioactive waste to electronic waste such as old computers, spent batteries and burned out fluorescent light bulbs.

Waste is managed in a modern waste transfer center designed not only to meet health, safety, industrial hygiene, fire protection and environmental protection demands, but also to maximize efficiency, minimize waste volumes and optimize ergonomics. This tour includes a visit to the transfer center, a demo of the hazmat trailer used for emergency response and an opportunity to have your souvenir picture taken in the ever-popular hazardous waste photo booth.



1:30 p.m.-4:30 p.m. TT-02 Bell Helicopter Textron Canada Limit  Manufacturing Facility

SOLD OUT

Special Requirements: Picture ID required. Flat shoes are required; high

heels or open shoes not permitted. The tour includes a one-hour walk on concrete floor (no stairs).



1:30 p.m.-4:30 p.m. TT-03 TOHU

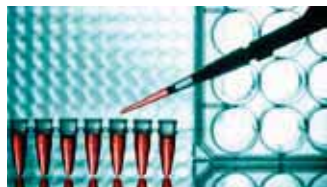
TOHU, a former quarry (and a hole in the ground in the city of Montreal for decades!), has been reclaimed as a multi-purpose sustainable development center. This diverse, mixed-use site houses a circus theater (not Cirque du

Soleil) and a recycling center and exhibits several green initiatives; all the buildings were constructed according to LEED standards.

This tour showcases different elements of TOHU's green landscaping and architecture. A bus tour within the complex highlights compost platforms, the biogas borehole wells, the pumping of leachate, conversion of green wastes, the transformation process for the future park, landscape geology and social and technological issues.

An interesting crossover between the arts and the environment – and still a work in progress – TOHU will interest future thinkers as a great example of sustainable development.

Wednesday, May 22



9:30 a.m.-12:30 p.m. TT-04 Institut de Recherche Robert-Sauv  en Sant  et en S curit  du Travail (IRSST)

Established in Qu bec since 1980,

IRSST is a scientific research organization in occupational health and safety. The Institute is a private, non-profit agency and its board of directors is composed of an equal number of trade union and employers' representatives. This tour focuses on the IRSST laboratories, which provide a range of analytical services from within the field of occupational hygiene to the public occupational health and safety prevention network (for a total of 30,000 samples per year).



9:30 a.m.-12:30 p.m. TT-05 Soci t  de Transport de Montreal

The STM operates Montr al's urban public transit including buses and subways. This tour offers an overview of OHS regulations and policies, emergency

evacuation procedures and the STM OHS action plan. Participants have an opportunity to visit the bus and subway car maintenance garages.

Special Requirements: No metal frame glasses may be worn during the maintenance area tour. Individual participants **must** bring their own safety glasses and safety shoes.

Thursday, May 23



9:00 a.m.-Noon TT-07 The Hydro-Quebec Beauharnois Generating Station

The Beauharnois Generating Station is one of the largest and most powerful

hydroelectric plants in the world equipped with 38 generating units stretching for nearly a kilometre. Health and safety specialists accompany regular tour guides and provide highlights of health and safety issues in the plant including a discussion of electric and magnetic field issues. You'll be amazed by this monument to human know-how; the Canal de Beauharnois was built more than 75 years ago and the award-winning Art Deco architecture makes this station one of Qu bec's outstanding heritage buildings.

Health Advisory: Individuals with pacemakers should not register for this tour.

ON ALL TOURS

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

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

Social Tours



Discover Montreal's "Joie de Vivre" on any one of the following exclusive tours! All AIHce registrants and guests are invited to participate. Purchase tickets at registration. Tickets are nonrefundable.

Monday, May 20



1:00 p.m.-4:00 p.m. | \$55 ST-01 Bonjour Montreal

Enjoy this exclusive, half-day introduction to the history and passionate culture of our cosmopolitan city.

Just some of the fascinating sites you'll see include the winding cobble streets and charming historic buildings of Old Montreal; Notre Dame Basilica, one of

the crown jewels in Quebec's rich religious heritage; the "Golden Square Mile," with its blend of elegant 19th century mansions and posh hotels; famous Mount Royal Park, the city's favorite playground and where Montreal gets its name; the Latin Quarter, a hot spot for gastronomy, culture and festivals; Sainte-Hélène and Notre Dame Islands, sites of the World's Fair in 1967 and now home to the popular Casino de Montreal and race track; and St. Joseph's Oratory of Mount Royal, the largest church in Canada.

What's included — Professional English-speaking guide, round-trip transportation, entrance fees.

Tuesday, March 21



8:00 a.m.-7:00 p.m. | \$145 ST-02 A Day in Quebec

Take a step back in time and visit the only walled city in North America. See the narrow cobble streets, the historic buildings and unique "old world" ambience.

Vieux-Québec was recognized as a World Heritage Treasure by UNESCO in 1985.

Place Royale and the National Assembly provide visitors with the opportunity to discover a rich past which blends with the daily life of this charming city. Stop at historic buildings, the Plains of Abraham — site of the decisive, final battle between the armies of Montcalm and Wolfe, and Le Petit Champlain, the oldest street in North America.

After lunch, explore the winding streets and lanes of the older sections of the city. Shoppers will delight in the excellent selection of antiques, local art, and specialty goods available within easy walking distance.

What's included — Professional English-speaking, guide, round-trip transportation, Orientation to Québec City, lunch in a popular local restaurant.

Note: This tour is approximately six hours round-trip.



9:00 a.m.-Noon | \$45 ST-03 Old Montreal — A Walking Tour

The rich cultural heritage of Old Montreal is yours to discover during this unique walking tour which traces the steps of one of North America's oldest cities.

Picturesque, handsomely preserved and vibrantly alive, Old Montreal invites you

to glimpse life from centuries past. Old Montreal is home to one of the continent's greatest collections of historic buildings from the 17th through the 19th centuries. Stroll through narrow lanes and ancient squares for a view of city life from times past. Among the many sites are the magnificent Notre Dame Basilica (1829), Montreal's first parish church, the impressive Bank of Montreal (1847), head office to the first permanent bank in Canada, City Hall, lively Place Jacques-Cartier and the revitalized Old Port.

What's included — Professional English-speaking guide, subway transfer, entrance fees.

Note: Comfortable shoes are a must for the promenade down centuries-old cobblestone streets.

Wednesday, May 22

9:00 a.m.-Noon | \$45 ST-04 Old Montreal — A Walking Tour (repeated)

See above description.



1:30 p.m.-4:30 p.m. | \$60 ST-05 A Taste of Montreal

From Italians to Portuguese to Asians, Montreal allows you to experience a trip around the world ... in just a few hours!

Sample a traditional bite to eat in

each ethnic quarter. From dragon's beard to bagels, this gastronomic excursion showcases the cultural diversity of the many vibrant ethnic groups in Montreal today. Pass through the Portal of the Sun and venture into Chinatown; follow St. Lawrence Boulevard to see German, Polish, Ukrainian and other ethnic restaurants and stores; stroll through the Greek community on Park Avenue; stop at the Jean-Talon Market in the center of Little Italy and learn about the evolution of the Jewish Hasidic Community on the edge of Outremont.

What's included — Professional English-speaking guide, round-trip transportation, food samplings along the way.

Board bus fifteen minutes prior to scheduled departure from the Palais, Viger Street, Lower Level.



Student and Young Member Activities

Future Leaders and Young Members Reception

(by invitation)

Sponsored by 3M



Sunday, May 19, 7:00 p.m.–10:00 p.m.

NEWTOWN, 1476 rue Crescent

(Downtown)

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

Students and Early Career Professionals Track

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

- **RT 203: Lessons Learned from Common IH Errors in Judgment and Ethical Dilemmas**
Monday, 10:30 a.m.–1:00 p.m.
Palais, 519
- **RT 212: Surviving and Thriving Abroad: Experiences and Lessons Learned from Working Overseas**
Monday, 2:00 p.m.–5:00 p.m.
Palais, 519
- **RT 219: IT for the IH**
Tuesday, 1:30 p.m.–4:30 p.m.
Palais, 511a
- **RT 236: Perspectives on Preparing for the CIH Exam v7.0**
Wednesday, 1:30 p.m.–4:30 p.m.
Palais, 511c

Table Topics

Monday, May 20, 1:00 p.m.–2:00 p.m.

Palais, Expo

Topics address issues of specific interest to young industrial hygienists or to hygienists new to the profession. Purchase lunch and select a discussion — seating is first-come, first-served. The first 20 students and early career professionals to appear at the Table Topics will receive a discounted voucher for lunch.

- **CIH Exam 101**, Facilitators: Nicole M. Greeson, CIH, Duke University, Hillsborough, NC, Lynn C. O'Donnell, CIH, American Board of Industrial Hygiene, Lansing, MI
- **Field Work and Travel for the IH**, Facilitator: Ted N. Grigorieff, Findlay, OH
- **Networking for the IH**, Facilitator: Cathy A. Hovde, Caterpillar, Crystal, MN
- **Breaking Down Barriers**, Facilitators: Members of AIHA Fellows SIG

Mentoring Program Networking Event

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

Monday, May 20, 6:00 p.m.–8:00 p.m.

Les Brasseurs St. Paul, 105 rue St. Paul Est (Old Town)

Join us at the Mentoring Program's 3rd Annual Networking Event!!! This event is open to all participating members of AIHA's Mentoring Program, as well as to students and professionals interested in being a mentor or having a mentor! The AIHA Mentoring Program is an excellent way to get involved in the community, to build your network and to support the development of another professional!

CareerAdvantage Development Fair 2013

Monday, May 20–Wednesday, May 22

Palais, 517d

Sponsored by the AIHA Career and Employment Services Committee, this year's *Building Careers for Life* development fair features sessions designed to help those in the occupational and environmental health and safety (OEHS) 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.

Volunteer Group Meetings

Monday, May 20–Thursday, May 23

These are not closed door meetings! AIHA has more than 45 volunteer groups who focus on a variety of technical topics and several that address student needs. Unless otherwise noted, volunteer group meetings are open to all. See page 100 for meeting times.

AIHF Fun Run/Walk HYGIENETECH

Sponsored by HygieneTech

Tuesday, May 21, 6:30 a.m.–8:00 a.m.

Old Port

Lace up your running shoes and support the work of the AIHF. Run 5K or walk 2K — all are welcome to participate! Purchase tickets for \$40 at Registration.

ALL registrants are required to check-in at the AIHF Fun Run/Walk desk by 5:30 p.m., Monday, to sign a waiver, pick up a bib, a T-shirt and a course map. No check-in or registration permitted at the race site.

Student Local Sections Council Business Meeting

Tuesday, May 21, 11:00 a.m.–1:00 p.m.

Palais, 524b

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

Tuesday, May 21, 2:00 p.m.–4:00 p.m.

Palais, 524b

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 are encouraged to attend.

Posters and Awards

Wednesday, May 22, 10:00 a.m.–Noon

Palais, Expo

Check out the scientific findings of your peers by attending the 23rd Annual Student Poster Session. Students discuss their research and two posters will be selected "Best of Session."

Awards given by AIHA Volunteer Groups will be presented at 12:30 p.m..

The UnSession

Wednesday, 10:00 a.m.–Noon

Palais, 520c

Sponsored by the Students and Early Career Professionals and Career & Employment Services Committees

The *UnSession* is not for those who like a passive learning experience with a traditional lecture approach. The *UnSession* is designed to provide an intimate, free-flow of ideas that traditional sessions frequently leave wanting. This session is flexible, spontaneous and participant-driven.

Issues and concerns of importance to early career professionals will be addressed including selling your ideas/yourself at work to various audiences, dealing with difficult ethical challenges and handling situations confronting you in your first few years as an IH professional.

An innovative way to connect, share, explore and brainstorm solutions to everyday challenges.

See page 55 for more information.



Palais des congres,
Room 517d

Check out the exciting
events happening at
Development Fair 2013!



Monday, May 20–
Wednesday, May 22
8:00 a.m.–4:00 p.m.



Online Job and Résumé Posting

Monday, May 20–Wednesday, May 22
8:00 a.m.–4:00 p.m.

Résumé Critiquing

Monday, May 20
8:30 a.m.–9:30 a.m. and 3:00 p.m.–4:00 p.m.

Tuesday, May 21
9:00 a.m.–10:00 a.m. and 2:00 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.

Limited slots are available.

Phone Interview Etiquette

Monday, May 20, 10:00 a.m.–10:45 a.m.

Kristin Osterkamp, CIH

Phone interview etiquette is just as important as in-person interview etiquette. When it comes to getting hired, a successful phone interview can be instrumental in getting you to the next step in the hiring process.

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

This seminar will provide you with an understanding of what you might expect during a phone interview and how best to prepare.

Surviving under the Magnifying Glass — What are HR and Hiring Managers Looking For?

Monday, May 20, 11:15 a.m.–12:15 p.m.

Mary Ellen Brennan, SPHR
Tom Blank, CIH, CSP

A look at the other side of the interview table to learn what HR and IH hiring managers look for in candidates and how to prepare yourself to make the cut.

Résumé Mind Mapping

Monday, May 20, 1:30 p.m.–2:30 p.m.

Mary Ellen Brennan, SPHR
Isabel Zulich
Nancy Lawrence, PhD, CIT

An interactive seminar, comingling practical information to improve your résumé with practical “hands on” application of the seminar concepts. We will be incorporating some “Unsession” concepts to stimulate the sharing and brainstorming of ideas among participants (see page XX for more information). Bring your résumé!

Speed Networking

Tuesday, May 21, 3:00 p.m.–4:00 p.m.

Ready, set, network!

Build lasting connections with colleagues from all levels and industries at this innovative and fun networking event. But make it quick – you'll only have two minutes with each person.

How to succeed at Speed Networking:

- Come prepared! Work on your introduction so that you can convey what's important in about one minute.
- Be a good listener and ask plenty of questions.
- Bring plenty of business cards and be ready to mingle!



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 Development Fair
Building Careers for Life

Awards and Recognition

Congratulations to our 2013 Award recipients for their enduring professional dedication. All will be honored during the AIHce 2013 Opening General Session on Monday, May 20.

AIHA® Awards



Edward J. Baier Technical Achievement Award

The **Edward J. Baier Technical Achievement Award** is given to the individual or group of individuals, company, academic institution, organization or association that has made the most significant contribution to industrial hygiene in recent years. The 2013 recipient is **Norman W. Henry, III, CIH**. Mr. Henry has been a contributing member of AIHA for over 30 years and he is one of the leading technical experts on chemical protective clothing. Since his

retirement from DuPont after 37 years, Mr. Henry operates his own industrial hygiene consulting company and teaches at the Delaware Technical School and Community College.



Distinguished Service Award

The **Distinguished Service Award** recognizes distinguished service in the advancement of industrial hygiene and unique technical contributions to the aims and goals of AIHA. The 2013 recipient is **S. Z. Mansdorf, PhD, CIH, CSP, QEP**. Dr. Mansdorf's professional career is unique, having served his country as an Army Bioenvironmental Engineer in Seoul, Korea; educating students as an adjunct associate professor on the Cleveland State faculty; starting his own business that provided industrial hygiene service

to clients; and working for a multi-national company in Paris as the senior vice president of Safety, Health and Environment.



Donald E. Cummings Memorial Award

The **Donald E. Cummings Memorial Award** is given for outstanding contributions to the knowledge and practice of industrial hygiene. The recipient presents the Cummings Memorial Lecture at AIHce. The 2013 recipient is **Lindsay E. Booher, CIH, CSP**. Mr. Booher's contributions to the professional practice are extensive, resulting in a significant and sustained reduction of worker exposures across the petrochemical industry. He played a major role in the development of the AIHA Exposure Assessment Strategy, and

he is commonly cited as the global subject matter expert in the identification and control of potential benzene exposures in the petrochemical industry.



Kusnetz Award

The **Kusnetz Award** honors a certified hygienist who has not reached his or her fortieth birthday by May 1 of the year in which the award is presented; is currently employed in the private sector; exhibits high ethical standards and technical abilities; has provided for the highest standards of health and safety protection; and who shows promise of leadership. The 2013 recipient is **Melissa Ling Cheszek, CIH, CEM, LEED-AP**. In addition to her role in founding the Green Building Working Group, Ms. Cheszek has been involved in

the Strategic Advisory Board for the AIHA Registry Programs. Her service to and passion for the profession is enormous, and her contagious enthusiasm motivates people to work together to improve how we protect and enhance the health, safety, comfort and productivity of workers.



Alice Hamilton Award

The **Alice Hamilton Award** is presented to an outstanding woman who has made a definitive, lasting achievement in the field of occupational and environmental hygiene through public and community service, social reform, technological innovation or advancements in the scientific approach to the recognition, evaluation and control of workplace hazards. The 2013 recipient is **Susan D. Ripple, MS, CIH**. Ms. Ripple has more than 25 years of professional, technical and management expertise in industrial

hygiene, exposure assessment, risk management and regulatory product safety. As the Dow Chemical Company's Senior Manager of Industrial Hygiene Expertise Center, she manages a team of 43 ABIH-certified industrial hygienists who provide their expertise, risk management strategies and product stewardship for approximately 52,000 employees in over 200 manufacturing facilities in 20 countries.



William P. Yant Award

The **Yant Award** is presented annually for outstanding contributions in industrial hygiene or allied fields to an individual residing outside the United States. The 2013 recipient is **Jukka Takala, PhD (DSc), BSc, MSc**. Dr. Takala is adjunct professor at the Tampere University of Technology in Finland and the Secretary General of the International Panel for Working Life. He has served the European Union as the Director of the European Agency for Safety and Health at Work, and was appointed executive director of the Workplace

Safety and Health Institute in Singapore in December 2011. Dr. Takala recently agreed to serve on the Advisory Council for the Center for Safety and Health Sustainability.

President's Award

The **President's Award** is presented annually to an individual, task force, special interest group or local section for outstanding contributions to the mission of the AIHA during the presidency year. Kept secret until AIHce, the award winner will be announced at the AIHA President's Reception on Wednesday, May 22.

2013 AIHA Fellows

AIHA® is proud to honor the 2013 distinguished Fellows who will be recognized during the Wednesday General Session and again at the Fellows SIG meeting Wednesday afternoon.

Awards and Recognition

ACGIH® Awards

Unless otherwise indicated, award recipients will be recognized at the ACGIH® Membership Reception and Annual Meeting of the Membership on Sunday, May 19 and at the Opening General Session on Monday, May 20.



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 **Erica Jones, CIH**. Ms. Jones received a BS in Chemical Engineering from The Ohio State University in 2004, and an MHS in Occupational and Environmental Hygiene from Johns Hopkins University in 2006. During her training she completed several internships with NIOSH, which set the stage

for her continued dedication to prevention through design and engineering control concepts. Since graduating, she has held a mix of research and engineering industrial hygiene positions and field industrial hygiene positions with ExxonMobil, which have enabled her contribution to both design and tactical industrial hygiene issues. As a hygienist with ExxonMobil Biomedical Sciences, part of the Research and Engineering branch of the company, she actively applied prevention through design concepts to eliminate overexposure potential in process designs. Ms. Jones has served in multiple officer roles for her AIHA local section in California and is currently the Chair of the AIHA Engineering Committee.



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 **Carol Rice, PhD, CIH**. Dr. Rice is an occupational hygienist with more than 35 years of experience in professional practice and 25 years in academic research and teaching and worker health and safety education. She specializes in the assessment of current industrial exposures and the evaluation of working lifetime exposures and has

a special interest in the use of historical exposure data to reconstruct past human exposures for occupational epidemiology studies. Dr. Rice directed the NIOSH-sponsored Education and Research Center (ERC) at the University of Cincinnati from 2008 until June of 2012 and served as Deputy Director for the previous nine years. She continues to serve the ERC as the Deputy Director of Occupational Hygiene and organizer of off-campus learning experiences, and is active in several research projects including beryllium, refractory ceramic fibers and Libby amphibole. Dr. Rice has served on a number of advisory boards and is currently a member of the NIOSH Board of Scientific Counselors.



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 **David Michaels, PhD, MPH**, Assistant Secretary of Labor for Safety and Health. Dr. Michaels is an epidemiologist, currently on leave from his position as Professor of Environmental and Occupational Health at the George Washington University School of Public Health. He is the author of studies examining the health of workers, as well as of numerous publica-

tions on science and regulatory policy. From 1998 to 2001, Dr. Michaels served as Assistant Secretary of Energy for Environment, Safety and Health, where he

helped create the Energy Employees Occupational Illness Compensation Program, a program that compensates nuclear weapons workers who contracted occupational illnesses as a result of exposure to radiation, beryllium and other hazards. The program has provided more than \$8 billion in compensation to sick workers and the families of deceased workers. In 2006, Dr. Michaels was awarded the American Association for the Advancement of Science's Scientific Freedom and Responsibility Award, and in 2009, the John P. McGovern Science and Society Award given by Sigma Xi, the Scientific Research Society, for his work in scientific integrity and for gaining compensation for nuclear weapons workers.



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 **Günter Oberdörster, DVM, PhD**.

Dr. Oberdörster is Professor in the Department of Environmental Medicine at the University of Rochester. He has also been the Director of the University of Rochester Ultrafine Particle Center, principal investigator of a Multidisciplinary Research Initiative in Nanotoxicology, and is currently Head of the

Pulmonary Core of the NIEHS Center Grant. His research includes the effects and underlying mechanisms of lung injury induced by inhaled non-fibrous and fibrous particles, including extrapolation modeling and risk assessment. His studies with ultrafine particles influenced the field of inhalation toxicology, raising awareness of the unique biokinetics and toxicological potential of nano-sized particles. Dr. Oberdörster has served on many national and international committees and is recipient of several scientific awards. He is on the editorial review boards of the Journal of Aerosol Medicine; Particle & Fibre Toxicology; Nanotoxicology; International Journal of Hygiene & Environmental Health; Nanomaterials and the Environment, and Associate Editor of Environmental Health Perspectives. This award will be presented at the Stokinger Lecture on Thursday, May 23.

AIHA Volunteer Groups

David L. Swift Memorial Award

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

Chaffin Award

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

Donna Doganiero Award

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

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 certificate and honorarium, is given to the best student poster presented at AIHce that relates to biosafety or microbiology.

Awards and Recognition

Lila Albin Award

Since 1997, the AIHA Indoor Environmental Quality (IEQ) Committee has evaluated peer-reviewed journal articles to bestow this award at the committee's annual meeting. Papers must: (a) be peer reviewed and published during 2012 in the *Journal of Occupational and Environmental Hygiene*; (b) provide practical information and expand knowledge base of IEQ professionals; (c) address a critical IEQ issue; and (d) present the topic clearly and engagingly. In 2012, the award was renamed in honor of the late Lila Albin, PhD, CIH to honor her skills, energy and enthusiasm as Chair of the AIHA IEQ Committee, Indiana Local Section / President, and Board Member/on-line editor for American Institute of Chemists.

John A. Leonowich Award for Educational Excellence in Non-ionizing 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 AIHA Respiratory Protection Committee, encourages scientific and application-oriented research in respiratory protection. It recognizes work that enhances the knowledge base in an area of understanding or provides new insight that will lead to improved employee protection.

John Palassis Memorial Award

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

Larry and Ruth Birkner Award

The Birkner Award is 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 long-time member of the Communication & 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.

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.

Rochelle Crew Memorial Award

This award is given by the AIHA Construction Committee to honor the memory of Ms. Crew, a former member of the committee and long-time instructor of construction safety PDCs. The award 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.

Tischauer Award

The Ergonomics Committee established the Tischauer Award in 1996 for Best Ergonomics Podium and Best Ergonomics Poster by a student. The award honors Dr. Erwin A. Tischauer's many contributions to the field of ergonomics and to AIHA. The award was established to recognize excellence in Ergonomics research by a student and to encourage conference participation in the field of Ergonomics.

Upton Sinclair Memorial Lecture

The Upton Sinclair Memorial Lecture on outstanding occupational health, safety, and environmental investigative journalism is hosted by the AIHA Social Concerns Committee. The 2013 Upton Sinclair Memorial Lecture will be delivered by Tony Hook from the Indianapolis Star at 10:30 a.m. on Tuesday May 21st.

The Golden Seed Award

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

AIHce Best Poster Award

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

2012 AIHA Bestseller

This award is presented to the editor of the publication that sold the most copies during the year. The 2012 Bestseller is presented to **Daniel H. Anna, PhD, CIH, CSP**, editor of *The Occupational Environment: Its Evaluation, Control, and Management*, 3rd edition. In 2012, AIHA sold 655 copies of this publication. The award will be presented at the Volunteer Recognition Reception and Ceremony.

2012 Critics' Choice Award

This award honors a publication completed in 2012 and evaluated by members of the Publications Committee. The committee selected this publication based on its impact on the profession, originality, and the quality of writing. This year's recipient is **Michael D. Larranaga, PhD, CIH, CSP, PE**, editor of the *Engineering Reference Manual*, 3rd edition. The award will be presented at the Volunteer Recognition Reception and Ceremony.

AIHA Local Section Awards

The MIHS "Best Paper" Award was established by MIHS in 1957 as recognition of outstanding publication in the *American Industrial Hygiene Association Journal*. In 1989, the MIHS Board of Directors voted to also recognize the authors of the "Best Paper" in applied industrial hygiene from the *Applied Occupational and Environmental Hygiene Journal*. Both journals combined in 2004 to form the current *Journal of Occupational and Environmental Hygiene*. MIHS continues to present a "Best Paper" award each year to the authors of the outstanding article selected from this journal at the Volunteer Recognition Reception. This year's winner is "Assessing Potential Nanoparticle Release During Nanocomposite Shredding Using Direct-Reading Instruments" by Peter Raynor, Jessica Ingraham Cebula, Bernard Olson (University of Minnesota), Jeffrey Spangenberg (Argonne National Laboratory), Jean Dasch and James D'Arcy (General Motors).

At Your Fingertips



Event Schedule | Social Media | AIHce Exhibitors | Alerts | Interactive Map
Downloads | Share Photos | Built-in Scheduling Calendar | AIHce Conference Daily

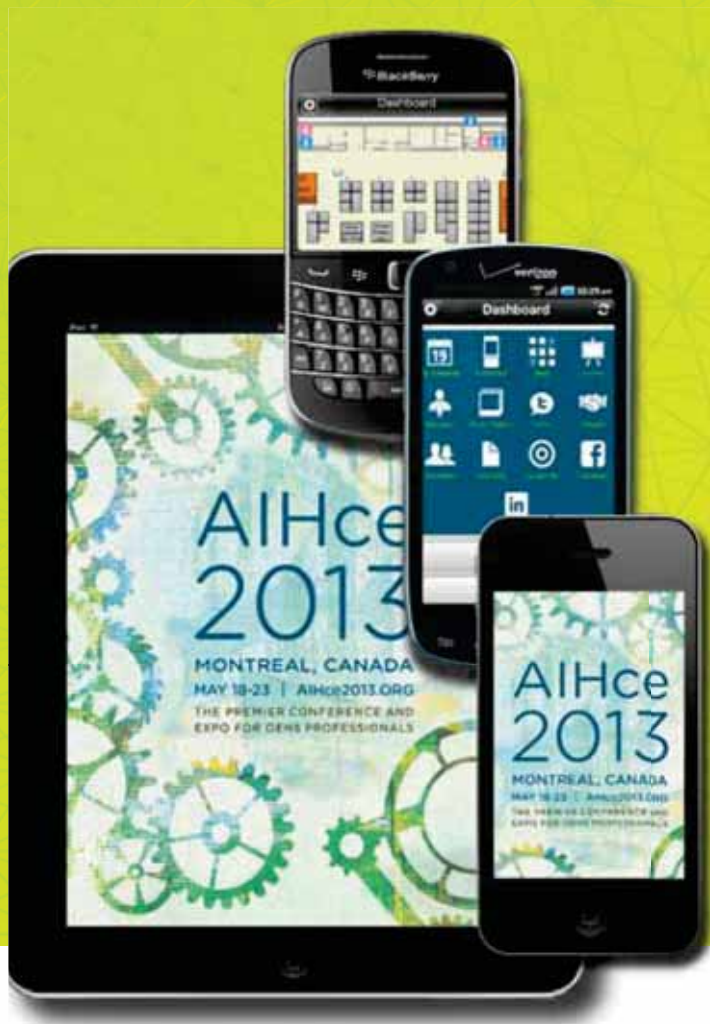


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Mobile App Now.*

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Android users: From your device,
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greater: Scan the QR code.

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software 6.0 or greater and other
web-enabled mobile phones:
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<http://m.core.apps.com/aihce2013>.



AIHce QR Code





Product Stewardship Society
Sustaining a Healthier Tomorrow

STEWARDSHIP 2013

A new world-class conference for product stewards and sustainability professionals



STEWARDSHIP 2013 NETWORKING RECEPTION

Sunday, May 19
5:30 p.m.–7:00 p.m.
Le Centre Sheraton, Level 2,
Salon 3

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

Stewardship 2013 Schedule *Professional Development Courses*

Saturday, May 18

8:00 a.m.–5:00 p.m.

- PDC 020 Registry Preparation: SDS and Label Authoring, Palais, 511f
- PDC 108 OSHA Hazard Communication and GHS Implementation, Palais, 519

Sunday, May 19

8:00 a.m.–5:00 p.m.

- PDC 420 REACH: A Risk Management Strategy, Palais, 510c
- PDC 422 Sustainability Measures and Metrics: Changing the World Through Transparency, Palais, 511c

Technical Sessions

Monday, May 20

8:00 a.m.–9:30 a.m.

• Opening General Session

The Medici Effect: Groundbreaking Innovation at the Intersection of Disciplines and Cultures, Palais, 517

10:00 a.m.–11:00 a.m.

- CR 301 Conducting Effective Safety Inspections, Palais, 520c
- CR 302 Exploring the EPA's Chemical Data Reporting Rule, Palais, 518

10:30 a.m.–12:30 p.m.

- PO 102 Biosafety and Environmental Microbiology I, Palais, 511b

- PO 105 Nanotechnology I, Palais, 510b

- PO 106 Risk Assessment/Risk Management Case Studies, Palais, 514

10:30 a.m.–1:00 p.m.

- RT 202 Implementing a "Buy Quiet" Strategy for Noise Reduction, Palais, 710b

11:30 a.m.–12:30 p.m.

- CR 303 LEED EB: O&M Greening Existing Buildings, Palais, 520c

1:30 p.m. – 5:00 p.m.

- PO 108 Innovative Approaches to Exposure Assessment, Palais, 511a



Technical Sessions

- SS 001 Emerging Challenges in Upstream Oil and Gas Operations, Palais, 510b

2:00 p.m.–3:00 p.m.

- CR 305 It's 1 AM and There are 38,000 Pounds of Spilled Material Outside the Plant. What Would You Do?, Palais, 516d

2:00 p.m.–4:40 p.m.

- PO 109 Aerosols I, Palais, 520a

2:00 p.m.–5:00 p.m.

- PO 110 Legal, Regulatory, Guidelines, Standards, Palais, 513a
- PO 112 Stewardship/Sustainability, Palais, 514
- RT 211 Environmental Disinfectants: Selecting the Right One for Right Job, Palais, 511c

Tuesday, May 21

8:00 a.m.–9:00 a.m.

- **General Session**

A Conversation on Occupational Health and Safety — Straight from the Top!, Palais, 517

9:30 a.m.–12:30 p.m.

- TT-01 McGill University Hazardous Waste Management Transfer Centre, Bus departs Palais, Viger Street at 9:15 a.m.

10:30 a.m.–12:30 p.m.

- RT 218 Crystalline Silica — Issues and Controls, Palais, 516a

10:30 a.m.–1:00 p.m.

- RT 215 Managing and Regulating Combustible Dust, Palais, 511c

1:00 p.m.–5:00 p.m.

- PO 120 No Crystal Ball Required: Predictive Exposure Assessment, Palais, 511b

1:30 p.m.–4:30 p.m.

- TT-02 Bell Helicopter Textron Canada Limited Manufacturing Facility, Bus departs Palais, Viger Street at 1:15 p.m.
- TT-03 TOHU
Bus departs Palais, Viger Street at 1:15 p.m.

1:30 p.m.–5:00 p.m.

- RT 221 REACH — Impacts on the Practice of Industrial Hygiene, Palais, 510b

2:00 p.m.–3:00 p.m.

- CR 309 Advancing EH&S Program Traction Through Sustainability Alignment, Palais, 516d

2:00 p.m.–4:00 p.m.

- PO 125 Green Building/LEED, Palais, 515

2:00 p.m.–4:30 p.m.

- PO 122 Risk Assessment/Risk Management Research, Palais, 513a

2:00 p.m.–5:00 p.m.

- PO 124 Aerosols II, Palais, 514

2:30 p.m.–4:00 p.m.

- Ignite “Enlighten me, but make it quick!”, Palais, 710a



Wednesday, May 22

8:00 a.m.–9:00 a.m.

- **General Session**

Your Guide to Total Worker Health, Palais, 517

9:30 a.m.–12:30 p.m.

- TT-04 Institut de Recherche Robert-Sauvé en Santé et en Sécurité du Travail (IRSST), Walkers depart Palais, Viger Street at 9:15 a.m.
- TT-05 Société de Transport de Montréal, Bus departs Palais, Viger Street at 9:15 a.m.

10:00 a.m.–11:00 a.m.

- CR 311 Exposure Scenarios: What You Need to Know to Comply with REACH's ES Requirement, Palais, 520b

10:00 a.m.–Noon

- PO 127 Nanotechnology II, Palais, 710a
- RT 228 GHS: Implementation and Impact on Workplaces in Canada and the U.S., Palais, 510a
- RT 231 OELs as a Hierarchy of Tools: Lessons in Global Use and Interpretation, Palais, 710b

1:00 p.m.–5:00 p.m.

- SS 003 Exposure Risk Management: Bridging Gaps Between Manufacturing and Product Safety, Palais, 710a

1:30 p.m.–2:30 p.m.

- CR 314 Emergency Response: The 3 C's for Managing Safety and Environmental Issues During a Spill Event, Palais, 516a

5:30 p.m.–8:00 p.m.

- RT 239 Occupational Respirable Crystalline Silica: A Global Concern, Palais, 514

Thursday, May 23

8:30 a.m.–10:30 a.m.

- RT 241 Global Exposure Limit Setting Processes — Harmonization on an OEL Hierarchy Approach, Palais, 514

8:30 a.m.–11:00 a.m.

- RT 244 GHS — The New Hazard Communication for North America, Palais, 510a

12:30 p.m.–1:30 p.m.

- CR 323 Industrial Ecology: What Is It and Why Should Industrial Hygiene Care?, Palais, 515

12:30 p.m.–3:30 p.m.

- PO 144 Aerosols III, Palais, 516d

12:30 p.m.–4:30 p.m.

- PO 146 Occupational Epidemiology, Palais, 513d
- RT 249 Dermal Exposure Assessment, Palais, 513a
- SS 004 Health Hazards Associated with Hydraulic Fracturing and Other Natural Gas Activities, Palais, 516a

MAY

16/17

THU-SAT

DAY AT-A-GLANCE



Thursday, May 16

9:00 a.m.–5:00 p.m.

- PDC 002 CIH Exam Preparatory Class, Palais, 512h



Friday, May 17

8:00 a.m.–5:00 p.m.

- PDC 001 CSP Exam Preparation Workshop, Palais, 512g
- PDC 002 CIH Exam Preparatory Class, Palais, 512h

5:00 p.m.–7:00 p.m.

Registration, Palais, Viger Hall



Saturday, May 18

7:00 a.m.–7:30 a.m.

Monitor Meeting for Saturday PDCs, Palais, 516c

7:00 a.m.–5:30 p.m.

Registration, Palais, Viger Hall
Speaker Ready Room, Palais, 516c

8:00 a.m.–Noon

- PDC 201 The Ethics of Workplace Violence Ethics – Understanding the Problem and Creating Solutions, Palais, 524b

8:00 a.m.–5:00 p.m.

- PDC 001 CSP Exam Preparation Workshop, Palais, 512g
- PDC 002 CIH Exam Preparatory Class, Palais, 512h
- PDC 010 Registry Preparation: Theory and Application of the 4 Gas/PID Sensor Technology, Palais, 511e
- PDC 020 Registry Preparation: SDS and Label Authoring, Palais, 511f
- PDC 101 Applying Health Hazard and Control Banding Strategies, Palais, 510c
- PDC 102 Disaster Responder: Protection for Workers in Diverse Hot Environments, Palais, 511a
- PDC 103 Dust Combustibility Hazards from Basics to Advanced, Palais, 513e
- PDC 104 EHS Professionals as Expert Witnesses, Palais, 511b
- PDC 105 Ergonomics Toolkit: Basic Tools, Palais, 511c
- PDC 106 Introduction to Risk Assessment for the Industrial Hygienist, Palais, 513c
- PDC 107 Noise Exposure Assessment: Sampling Strategy and Data Acquisition, Palais, 515
- PDC 108 OSHA Hazard Communication and GHS Implementation, Palais, 519
- PDC 109 Practical Aspects of Mass Casualty Patient Decontamination, Palais, 510a

- PDC 110 The Art of Safety – Mastering Advanced Communication Techniques, Palais, 516d
- PDC 111 Welding: IH's Newest Challenge, Palais, 513a
- PDC 112 Asbestos Health Risk Assessment: Modeling, Characterization and Communication, Palais, 514
- PDC 701 Exposure Assessment Strategies and Statistics, Palais, 520a
- PDC 702 NFPA 70E (2012): Basic Electrical Safety/Arc Flash, Palais, 520b
- PDC 703 Exposure Judgement: Improving Inhalation, Dermal and Noise Assessments, Palais, 520c

1:00 p.m.–5:00 p.m.

- PDC 301 Control Banding: Respirator Selection for Bioaerosols, Palais, 525
- PDC 302 Introduction to EHS for the Nanotechnology Industry, Palais, 523
- PDC 303 Occupational Exposure Limits: A Hierarchy of Tools, Palais, 524b

AIHA

8:30 a.m.–5:00 p.m.

Analytical Accreditation Board Meeting, Sheraton, Drummond Centre, Level 3

9:00 a.m.–5:00 p.m.

Academy of Industrial Hygiene Council Meeting, Sheraton, Salon 6, Level 3



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



**Sunday, May 19****7:00 a.m.–7:30 a.m.**Monitor Meeting for Sunday PDCs, *Palais 516c***7:00 a.m.–5:30 p.m.**Registration, *Palais, Viger Hall*Speaker Ready Room, *Palais 516c***8:00 a.m.–Noon**

- PDC 501 Evaluating Data Quality for Exposure Assessment, *Palais, 523*
- PDC 502 Smart Devices and the EHS Professional, *Palais, 524a*
- PDC 503 The Ethics of Workplace Violence – Understanding the Problem and Creating Solutions, *Palais, 524b*
- PDC 504 Whole Air Sampling: Choices, Advantages, Experiences, and Analysis, *Palais, 525*

8:00 a.m.–5:00 p.m.

- PDC 001 CSP Exam Preparation Workshop, *Palais, 512g*
- PDC 002 CIH Exam Preparatory Class, *Palais, 512h*
- PDC 401 Bayesian Statistics: Overview and Applications in Industrial Hygiene Data Interpretation, *Palais, 516d*
- PDC 403 Chemical Reactivity Hazards: Laboratory Scale Recognition/Control, *Palais, 511e*
- PDC 404 Disinfection for Infection Prevention – Industrial Hygiene Implications, *Palais, 518b*
- PDC 405 EHS Management Systems 101, *Palais, 512e*
- PDC 406 Engineering Controls to Minimize Fugitive Dusts, *Palais, 512f*
- PDC 407 Ergonomics Toolkit: Advanced Tools, *Palais, 518c*
- PDC 408 Exceptional Functional Leadership, *Palais, 519*
- PDC 409 Fall Protection: How Comfortable are You with the ABC's of Fall Protection?, *Palais, 511b*
- PDC 410 Fatigue Management: Applying New ANSI Standards to Improve Health and Safety, *Palais, 513a*
- PDC 411 IAQ in Green Building Systems and Codes, *Palais, 510d*
- PDC 412 If I'm Teaching Why Aren't They Learning?!, *Palais, 521b*
- PDC 413 Incorporating Prevention through Design Methods into Design/Redesign, *Palais, 516a*
- PDC 414 Managing Radiation Safety Programs for Industrial Hygienists, *Palais, 510a*
- PDC 415 Methods and Applications for Chemical Detection in Real Time, *Palais, 511a*

- PDC 416 Monte Carlo Techniques in Exposure and Risk Assessment, *Palais, 511f*
- PDC 417 Noise Control Engineering, *Palais, 513c*
- PDC 418 Occupational Exposure Assessment in the Nanotechnology Industry, *Palais, 515*
- PDC 419 Optimizing Hearing Protection and Hearing Loss Prevention, *Palais, 522b*
- PDC 420 REACH – A Risk Management Strategy, *Palais, 510c*
- PDC 421 Risk Management for Pregnant Workers, *Palais, 514*
- PDC 422 Sustainability Measures and Metrics: Changing the World Through Transparency, *Palais, 511c*
- PDC 423 The AIHA Value Strategy: Financial Value Analysis Made Simple, *Palais, 518a*
- PDC 424 Vapor Intrusion Investigation, Mitigation and Case Studies, *Palais, 510b*
- PDC 701 Exposure Assessment Strategies and Statistics, *Palais, 520a*
- PDC 702 NFPA 70E (2012): Basic Electrical Safety/Arc Flash, *Palais, 520b*
- PDC 703 Exposure Judgement: Improving Inhalation, Dermal & Noise Assessments, *Palais, 520c*

1:00 p.m.–5:00 p.m.

- PDC 601 Aerial Dispersion Tools for Emergency Responders, *Palais, 523*
- PDC 602 Fundamentals of Chemical Protective Clothing, *Palais, 525*
- PDC 603 Fundamentals of Occupational Toxicology, *Palais, 524b*
- PDC 604 Particle Size-Selective Aerosol Sampling, *Palais, 524a*

5:30 p.m.–6:30 p.m.AIHce First Timer Orientation, *Palais, 710a***ACGIH®****8:00 a.m.–4:00 p.m.**Board of Directors Meeting, *Sheraton, Salon 5, Level 2***6:00 p.m.–7:30 p.m.**Membership Reception and Annual Meeting of the Membership, *Sheraton, Drummond West, Level 3***AIHA®****8:00 a.m.–4:30 p.m.**Board of Directors Meeting, *Sheraton, Drummond Centre, Level 3***5:30 p.m.–7:00 p.m.**AIHA-LAP, LLC Accredited Laboratories Forum, *Sheraton, Drummond East, Level 3*Stewardship 2013 Networking Reception, *Sheraton, Salon 3, Level 2***6:00 p.m.–9:00 p.m.**Academic Accreditation Committee, *Sheraton, Salon 7, Level 3***7:00 p.m.–9:00 p.m.**Joint Industrial Hygiene Ethics Education Committee, *Sheraton, Salon 4, Level 2***7:00 p.m.–10:00 p.m.**Future Leaders and Young Members Reception (by invitation), *NEWTOWN, 1476 Rue Crescent (downtown)***AIHA Registry Programs®****1:00 p.m.–5:00 p.m.**4-Gas Meter/PID Operators Registry Examination, *Westin, McGill, 8th Floor***4:00 p.m.–6:00 p.m.**SME Team Leader Meeting, *Westin, St. Helene, 8th Floor***AIHF****6:00 p.m.–7:00 p.m.**Recognition Reception (by invitation), *NEWTOWN, 1476 Rue Crescent (downtown)***JOEH****7:00 p.m.–9:00 p.m.**Editorial Review Board Meeting, *Sheraton, Salon 1, Level 3***Ancillary****7:30 a.m.–5:00 p.m.**ABIH Board Meeting, *Sheraton, Salon 6, Level 3***8:00 a.m.–5:00 p.m.**Board of Certification in Professional Ergonomics (BCPE) Certification Exam, *Sheraton, Salon 7, Level 3***9:30 a.m.–4:00 p.m.**IOHA Board Meeting (by invitation), *Université de Montréal, 2900 Boulevard Edouard-Montpetit***Note Meeting Rooms ...**

Palais des congrès de Montréal = Palais
 Le Centre Sheraton Montréal = Sheraton
 Le Westin Montréal = Westin

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Tuesday, May 21, 9:00 a.m. – 3:00 p.m.

Wednesday, May 22, 9:00 a.m. – 1:30 p.m.

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Monday, May 20

7:00 a.m.–5:30 p.m.

Registration, Palais, Viger Hall

7:30 a.m.–5:30 p.m.

Speaker Ready Room, Palais 516c

8:00 a.m.–9:30 a.m.

Opening General Session**The Medici Effect: Ground-breaking Innovation at the Intersection of Disciplines and Cultures****Frans Johansson, CEO**
The Medici Group, New York, NY
Palais, 517

8:00 a.m.–4:00 p.m.

CareerAdvantage Development Fair 2013,
Palais, 517d

9:00 a.m.–4:00 p.m.

Volunteer Red Carpet Club, *Palais, 512g*

9:00 a.m.–5:30 p.m.

Expo**Passport to Prizes, Expo Theater, Special Displays, Cyber Center, Restaurants, Lounges.** No sessions scheduled 9:30 a.m.–10:30 a.m. and 12:30 p.m.–2:00 p.m.

9:00 a.m.–5:30 p.m.

Posters*Expo***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.–11:00 a.m.

- CR 301 Conducting Effective Safety Inspections, *Palais, 520c*

10:00 a.m.–11:00 a.m.

- CR 302 Exploring the EPA's Chemical Data Reporting Rule, *Palais, 518*

10:00 a.m.–12:30 p.m.

- PO 101 Sustaining a Management System, *Palais, 511a*

10:00 a.m.–2:00 p.m.

Exhibitor Product Demos and Presentations,
Expo Theater, *Expo*

10:30 a.m.–Noon

Bienvenue Montreal (admission by ticket),
Sheraton, Drummond Centre, Level 3

10:30 a.m.–Noon

- Best Practices for Smaller Consulting Firms: Success and Oops!, *Palais, 520a*

10:30 a.m.–12:30 p.m.

- PO 102 Biosafety and Environmental Microbiology, *Palais, 511b*
- PO 103 Health Care I: Hazardous Drug Wipe Testing and Biological Monitoring and Selected Infection Control Issues, *Palais, 515*
- PO 104 Laboratory Health and Safety – Current Topics, *Palais, 513a*
- PO 106 Risk Assessment/Risk Management Case Studies, *Palais, 514*
- RT 204 Recent Advances in Sampling and Analytical Methods, *Palais, 511c*
- RT 205 Active Fall Protection: An International Perspective, *Palais, 516a*
- RT 207 Implementation of Industrial Hygiene Database Systems – Experiences and Lessons Learned, *Palais, 513d*

10:30 a.m.–1:00 p.m.

- RT 201 Ergonomic Analysis Tools: North American Perspectives, *Palais, 510a*
- RT 202 Implementing a “Buy Quiet” Strategy for Noise Reduction, *Palais, 710b*
- RT 203 Lessons Learned from Common IH Errors in Judgment and Ethical Dilemmas, *Palais, 519*

11:00 a.m.–12:30 p.m.

- PO 105 Nanotechnology I, *Palais, 510b*

11:30 a.m.–12:30 p.m.

- CR 303 LEED EB: O&M Greening Existing Buildings, *Palais, 520c*
- CR 304 Measuring Safety Performance with Leading Indicators, *Palais, 520b*

12:30 p.m.–1:30 p.m.

Jeffrey S. Lee Award Lecture, *Palais, 518*

12:30 p.m.–2:00 p.m.

EV-03 IH Mysteries Workshop, *Palais, 512a*EV-04 Luncheon Discussion: Occupational Exposure Limit Setting – Is There a Future?, *Palais, 512e*

1:00 p.m.–1:30 p.m.

Government Affairs Update, *Palais 523b*

1:00 p.m.–2:00 p.m.

Students and Early Career Professionals Table Topics,
Palais, Expo

1:00 p.m.–5:00 p.m.

ST-01 Bonjour Montreal
Bus departs Palais, Viger Street, at 12:45 p.m.

1:00 p.m.–5:00 p.m.

- RT 208 Asbestos Risk Assessment in International Practice: Is This a Settled Issue?, *Palais, 710a*

1:30 p.m.–5:00 p.m.

- PO 107 An Eclectic Collection of Presentations Reflecting Social Concerns, *Palais, 511b*
- PO 108 Innovative Approaches to Exposure Assessment, *Palais, 511a*
- SS 001 Emerging Challenges in Upstream Oil and Gas Operations, *Palais, 510b*

2:00 p.m.–3:00 p.m.

- CR 305 It's 1 a.m. and there are 38,000 Pounds of Spilled Material Outside the Plant. What Would You Do?, *Palais, 516d*

2:00 p.m.–4:30 p.m.

- PO 109 Aerosols I, *Palais, 520a*

2:00 p.m.–5:00 p.m.

- PO 110 Legal, Regulatory, Guidelines, Standards, *Palais, 513a*
- PO 111 Respiratory Protection I, *Palais, 513d*
- PO 112 Stewardship/Sustainability, *Palais, 514*
- PO 113 Topics in Occupational Health, *Palais, 515*
- RT 209 Confined Space Entry: Challenges and Solutions, *Palais, 516a*
- RT 210 Cut It Out! Noise Control Solutions, *Palais, 710b*
- RT 211 Environmental Disinfectants: Selecting the Right One for the Right Job, *Palais, 511c*
- RT 212 Surviving and Thriving Abroad: Experiences and Lessons Learned from Working Overseas, *Palais, 519*
- RT 213 An Overlooked Health Hazard: Fatigue, *Palais, 510a*

3:30 p.m.–4:30 p.m.

- CR 306 Basic Workplace Fall Protection: A Common Sense Approach to Recognition and Control of Elevated Work Hazards, *Palais, 516d*

4:00 p.m.–5:30 p.m.

Expo Opening Cocktail Reception

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

Note Meeting Rooms ...Palais des congrès de Montreal = Palais
Le Centre Sheraton Montreal = Sheraton
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ACGIH®

10:30 a.m.–Noon

FOHS Board of Trustees Meeting, *Palais, 512b*

AIHA®

10:00 a.m.–10:30 a.m.

Consultants Special Interest Group, *Palais, 520a*

10:00 a.m.–Noon

Aerosol Technology Committee, *Palais, 523a*

Exposure Assessment Strategies Committee,
Palais, 524c

Incident Preparedness and Response Working Group,
Palais, 523b

Law Committee, *Palais, 522b*

Oil and Gas Working Group, *Palais, 524a*

Protective Clothing and Equipment Committee,
Palais, 522c

Social Concerns Committee, *Palais, 524b*

11:00 a.m.–1:00 p.m.

Guideline Foundation, *Palais, 445*

Noon–1:00 p.m.

Indigo Council, *Westin, Viger, 8th Floor*

12:30 p.m.–1:30 p.m.

Academy Conference Team, *Palais, 512f*

Blue Council, *Westin, Palais, 8th Floor*

1:00 p.m.–3:00 p.m.

Engineering Committee, *Palais, 523a*

Indoor Environmental Quality Committee,
Palais, 524a

Ionizing Radiation Committee, *Palais, 521a*

Real-Time Detection Systems Committee, *Palais, 524b*

Value Strategy Committee of the Academy,
Palais, 522b

2:00 p.m.–4:00 p.m.

Continuing Education Committee, *Palais, 521b*

Finance Committee, *Palais, 522a*

2:00 p.m.–6:00 p.m.

International Affairs Committee, *Sheraton, Drummond East, Level 3*

3:30 p.m.–5:30 p.m.

Computer Applications Committee, *Palais, 521a*

Environmental Issues Committee, *Palais, 522b*

Ergonomics Committee, *Palais, 523a*

Indoor Environmental Quality Special Interest Group,
Palais, 525

Laboratory Health and Safety Committee,
Palais, 523b

Management Committee, *Palais, 524a*

Nanotechnology Working Group, *Palais, 524b*

Sampling and Laboratory Analysis Committee,
Palais, 524c

6:00 p.m.–8:00 p.m.

SECP Mentoring Program Networking Event,
Les Brassuers St. Paul, 105 rue St. Paul est

6:30 p.m.–8:00 p.m.

International Reception (by invitation), *Sheraton, Salle de bal Centre, Level 4*

AIHA Registry Programs®

10:00 a.m.–Noon

SME Team Meeting: SDS and Labeling Authoring,
Palais, 512d

SME Team Meeting: IAQMP (Existing Buildings),
Palais, 512h

Ancillary

10:00 a.m.–Noon

ABET Accreditation Workshop, *Palais, 522a*

10:30 a.m.–Noon

ANSI Z88 Committee, *Palais, 525*

10:30 a.m.–12:30 p.m.

International Training/Qualifications in OH,
Palais, 516d

5:00 p.m.–9:00 p.m.

Department of Energy (DOE) and DOE Contractor
Industrial Hygiene Meeting, *Sheraton, Drummond Centre, Level 3*

5:30 p.m.–7:30 p.m.

University of Minnesota Alumni & Friends Reunion,
Sheraton, Jarry, Level A

6:30 p.m.–8:00 p.m.

Johns Hopkins University Reception, *Sheraton, Lamartine, Level A*

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Questions? Visit the Speaker Ready Room, *Palais, 516c*



Opening General Session

8:00 A.M.–9:30 A.M. | PALAIS, 517

The Medici Effect: Groundbreaking Innovation at the Intersection of Disciplines and Cultures

Frans Johansson, CEO, The Medici Group, New York, NY

Frans Johansson is a successful entrepreneur and a recognized thought leader on innovation. His best-selling book, *The Medici Effect*, has been translated into 18 languages and was named one of the top 10 business books by Amazon.com. In this session, Johansson reveals how we can find intersections in our lives and turn these ideas into groundbreaking innovations. The three driving forces behind these intersections are the movement of people, the convergence of scientific disciplines and the leap in computational power.

A high-energy, dynamic presenter, Johansson has been featured on CNN's AC360, ABC's *Morning Show* and CNBC's *The Business of Innovation* series.

Showtime

7:45 a.m.

Enjoy the melodic sounds of Steve Normandin who will woo you with a mix of contemporary jazz/swing and French pop.



Exhibitor Product Demos and Presentations

10:00 a.m.–1:00 p.m. | Expo Theater

10:00 a.m.

Introduction to Single Gas DualSense™ Technology, Industrial Scientific Corporation

For users of single gas detectors, one of the greatest challenges they face is functional (bump) testing their instruments prior to each day's use. For customers with a large fleet, this can be either difficult or downright impossible to accomplish. It is for this reason that Industrial Scientific has developed DualSense Technology. This presentation will introduce how this technology provides a level of instrument safety far beyond what a single sensor solution can provide.

10:30 a.m.

Remote WiFi Access to Portable IAQ, LEED 3.2, Toxic Gas Monitors, GrayWolf Sensing Solutions

GrayWolf Live™ is a powerful new webhosting option offered by GrayWolf Sensing Solutions that allows remote access via any internet connected device (e.g., Apple iPad, Android phone), to GrayWolf's full range of WiFi-enabled environmental monitoring kits (e.g., AdvancedSense, DirectSense, WolfPack). Access our portable and semi-permanent multi-parameter IAQ, LEED 3.2, Toxic Gas, or HVAC application kits to review logged data. Parameters accessible include: VOCs, Carbon Dioxide, Formaldehyde, Ozone, Particulate, DP, and much more.

11:30 a.m.

TurtleSkin CP Neon — the Nimble Cut & Puncture Glove, Warwick Mills — Turtleskin

See an eye-opening demo of TurtleSkin CP Neon 500. From 28-gauge hypodermic needlesticks to sharp metal and glass shards, witness how this nimble cut and puncture glove will protect from sharp and hazardous objects. ANSI CUT 5, ANSI

PUNCTURE5, ANSI ABRASION 6. In addition, we will explain how this affordable, general safety glove offers an unparalleled protection/dexterity ratio. It's strong and durable, yet soft and flexible. CP Neon's new patent-pending technology really should be witnessed firsthand.

Noon

Achieving Hazcom2012 and Global GHS Compliance Using ExESS® SDS Authoring Automation, Lisam Systems

Despite the promise of GHS being "Global" and "Harmonized," key regulatory differences persist between major commercial markets in GHS classification, disclosure, and formatting of Safety Data Sheets and Shipping Labels. Lisam Systems demonstrates how ExESS® software manages these rules to automate the generation of GHS classifications, Safety Data Sheets and Labels in 40+ languages. The demonstration will give specific attention to Hazcom2012 and any late developments regarding GHS in Canada.

12:30 p.m.

3M Eyewear Fit System — A New Tool to Help Ensure that Properly Fitting Eyewear Is Incorporated into Your Eye Safety Program, 3M Personal Safety Division

Improperly fitted or incorrectly worn safety eyewear may not provide adequate protection in the work environment. 3M has developed an eyewear fit evaluation method and tools designed to help compare different styles or models of eyewear on an individual in order to select the best fitting models.

CR 301**Conducting Effective Safety Inspections**

10:00 a.m.-11:00 a.m. | Palais, 520c

Presenter: C. Muncy, Concurrent Technologies Corporation, Fairborn, OH. **Moderator:** P. Kumler, GreCon, Tigard, OR.

A company with \$100,000 in costs related to workplace injuries will have to produce an additional \$2 million in revenue just to cover the expense, assuming a 5% profit margin. Safety inspections are critical to cost-containment, but with limited time and resources how can one best make the most of time spent on these inspections? Learn to optimize your safety inspection process to net you the greatest results by taking a light-hearted but comprehensive look at this process.

CR 302**Exploring the EPA's Chemical Data Reporting Rule**

10:00 a.m.-11:00 a.m. | Palais, 518

Presenter: K. Blake, 3E Company, Carlsbad, CA.

In this session, the speaker will provide an update on the status of TSCA Reform, with a particular emphasis on new CDR reporting requirements. She will explore the challenges associated with conforming to these new requirements and outline strategies for achieving compliance. In addition, she will discuss how companies can prepare for future reporting requirements and provide real-world examples of lessons learned from previous reporting deadlines.

ABET Accreditation Workshop

10:00 a.m.-Noon | Palais, 522a

The session will introduce ABET and its accreditation processes to institutions with programs considering ABET accreditation. It will also deal with recent changes in ABET's policies, procedures and criteria that impact accreditation, as well as initiatives that ABET is taking to streamline and lessen the expense of accreditation. The workshop will also discuss ABET's expansion into global accreditation.

PO 101**Sustaining a Management System**

10:00 a.m.-12:30 p.m. | Palais, 511a

Arranger: R. Lawson, Fort Wayne, IN. **Moderator:** R. Deist, Accellent, Inc., Wilmington, MA. **Monitors:** R. Newman, Marathon Petroleum, Elmore, OH; H. Woodcock, Scolopax Health & Safety, Clayton, NC.

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

CS-101-01 The Department of Energy's Integrated Safety Management System. D. Weitzman, U.S. Dept. of Energy, Washington, DC.

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

CS-101-02 Developing Effective EHS Leading Objectives. D. Downs, EHS Management Partners, LLC, Shorewood, MN.

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

CS-101-03 Kicking the Tires on MS Quality in Three Different Industries. T. Rancour, Rancour & Associates, LLC, Northville, MI; B. Russell, Systems Approach, LLC, Simsbury, CT.

11:30 a.m.-Noon

CS-101-04 Managing Occupational Health and Hygiene Through a Matrix Organization. M. Karr, Shell Oil Company, Deer Park, TX.

Noon-12:30 p.m.

CS-101-05 Annual Management System Review. K. Dotson, DOTSON Group, LLC, Los Altos Hills, CA.**Best Practices for Smaller Consulting Firms: Successes and Oups!**

10:30 a.m.-Noon | Palais, 520a

A panel of experienced consultants will discuss best practices and answer common questions to help grow your business. The panel will address successes and failures as well as opportunities for the future. Bring your questions and see if you can stump the panel. Follows the Consult SIG's brief business meeting (10:00 a.m.).

PO 106**Risk Assessment/Risk Management Case Studies**

10:30 a.m.-12:30 p.m. | Palais, 514

Arrangers: B. Heckman, LaCroix Davis LLC, Carlisle, PA; M. Canright, Forensic Analytical Consulting Services, San Diego, CA. **Moderator:** S. Anderson, SGS Group Management, Houston, TX. **Monitors:** M. Kolanz, Materion Brush Inc., Mayfield Heights, OH; A. Haugh, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

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

CS-106-01 Asbestos in the Dirt ? The Critical Role of Industrial Hygiene in a High-Profile Brownfield Redevelopment Project. W. Beadie, Maul Foster & Alongi, Inc., Portland, OR.

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

CS-106-02 Occupational Health Management in Hydraulic Fracturing. An Experience in a Western Texas Operation. M. Sanchez, F. Bhojani, Shell Oil Company, Houston, TX.

11:30 a.m.-Noon

CS-106-03 Establishing Practical Risk Categories for Lead Exposures During Bridge Maintenance Work Activities. A. Wagner, Golder Associates Inc., Jacksonville, FL; B. Martin, CSX Transportation Inc., Jacksonville, FL.

Noon-12:30 p.m.

CS-106-04 Methodology for Predicting Costs and Risks Using Injury and Illness Data. G. Bratt, C. Spencer, LMI, Belcamp, MD; T. Kluchinsky, U.S. Army, Aberdeen Proving Ground, MD.**RT 203****Lessons Learned from Common IH Errors in Judgment and Ethical Dilemmas**

10:30 a.m.-1:00 p.m. | Palais, 519

Arranger: W. Cyrs, ChemRisk, LLP, San Francisco, CA. **Moderator:** T. Grigorieff, Marathon Petroleum Company, Findlay, OH. **Monitors:** K. Schmid, Praxair, Inc., Inver Grove Heights, MD; M. Le, ChemRisk, LLP, San Francisco, CA.

Career development in any field involves not only anticipating and thereby preventing pitfalls from occurring, but also learning from the mistakes and accidents of oneself and others. Industrial hygiene is certainly no exception. The purpose of this roundtable is to highlight examples of problematic decisions, overlooked risk factors, workplace missteps, and problematic miscommunications from which current IH professionals have lived to tell the tale, with the goal of instructing peers on the common mistakes that are made by developing IHS. The speakers will give examples of unfortunate events that they have experienced in their practice, circumstances leading up to those events, the extent of adverse outcomes, methods by which they resolved the problems, and lessons they learned. Examples will also be given of ethical issues that the presenters have faced. Attendees will learn better work practices and how to prevent and avoid mistakes. And, if problems arise, they will not only have knowledge of resolution options but can put the problems into the perspective of the IH community, knowing that they are not alone.

- **Top Ten List of IH Slip-Ups.** R. Anthony, University of Iowa, Iowa City, IA.
- **Working with Contractors.** K. Schmid, Praxair NAIG Safety & Environmental Services, Inver Grove Heights, MN.
- **And the Top Ten Issues that IH Laboratories Have with Industrial Hygienists Are ...** D. Sandusky, Forensic Analytical Laboratories, Inc., Hayward, CA.
- **The Language of "Experts."** N. Sanders, IAQ Consulting Partners, Atlanta, GA.
- **Common Communication Dilemmas in Corporate Settings and Governmental Agencies.** J. Henshaw, ChemRisk, LLP, Sanibel, FL.

PO 102

Biosafety and Environmental Microbiology I

10:30 a.m.-12:30 p.m. | Palais, 511b

Arranger/Moderator: C. Peart, IES Engineers, Blue Bell, PA. **Monitors:** J. Peters, Brookhaven National Laboratory, Upton, NY; M. Nonnenmann, IA.

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

CS-102-01 Indoor/Outdoor Fungal Comparisons in Isolated Remediation. E. Sullivan, E.A. Sullivan & Associates, London, ON, Canada; R. Hussain, IHEAS Inc., London, ON, Canada.

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

SR-102-02 Five-Year Analysis of Outdoor Mold Spore Concentrations Across Canada, and Implications for IAQ Investigations. R. Dulyamamode, B. Stewart, Pinchin Environmental Ltd., Mississauga, ON, Canada.

11:30 a.m.-Noon

SR-102-03 Evaluation of the NIOSH BC-251 Personal Bioaerosol Sampler for Sampling Viable and Culturable Pathogenic Bacteria. M. Davidson, L. Goodridge, B. Bisha, S. Reynolds, Colorado State University, Fort Collins, CO.

Noon-12:30 p.m.

CS-102-04 Moisture Variation in Walls and Interiors Floors of a Bungalow All Year Long (Moisture Related to Molds). M. Legris, Agence de la sante et des services sociaux de la Capitale-Nationale, Quebec, QC, Canada.

PO 103

Health Care I: Hazardous Drug Wipe Testing and Biological Monitoring and Selected Infection Control Issues

10:30 a.m.-12:30 p.m. | Palais, 515

Arranger: M. Jones, Department of Veterans Affairs, Iowa City, IA. **Moderator:** J. Koerner, DHHS/ASPR, Washington, DC. **Monitors:** S. Carry, Kaiser Permanente, Oakland, CA; M. Jones, Department of Veterans Affairs, Iowa City, IA.

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

CS-103-01 Hazardous Drug Wipe Sampling Study in a Chemo-Naive Building. M. McCullough, Dana-Farber Cancer Institute, Boston, MA.

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

SR-103-02 Urinary Contamination of Health Care Workers to Antineoplastic Drugs Throughout the Entire Hospital Medication Circuit. C. Hon, Ryerson University, Toronto, ON, Canada; K. Teschke, W. Chu, University of British Columbia, Vancouver, BC, Canada; P. Demers, Ontario Cancer Research Centre, Toronto, ON, Canada; S. Venners, Simon Fraser University, Burnaby, BC, Canada.

11:30 a.m.-Noon

CS-103-03 A Comparison of Monitoring Methods for Hydrogen Peroxide During High-Level Disinfection. W. Xu, E. Stewart, Kaiser Permanente, Pasadena, CA.

Noon-12:30 p.m.

CS-103-04 Do Antimicrobial Fabrics Decrease Infections? P. Luebbert, Healthcare Interventions, Omaha, NE.

PO 104

Laboratory Health and Safety — Current Topics

10:30 a.m.-12:30 p.m. | Palais, 513a

Arranger/Moderator: W. Galdenzi, Boehringer-Ingelheim Pharmaceuticals, Northford, CT. **Monitors:** M. Manna, PPG Industries Inc., Monroeville, PA; K. Capwell, Eastern Research Group, Arlington, VA.

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

CS-104-01 Mercury, Where Did it Come from and Where Did it Go? G. Moore, Architect of the Capitol, Washington, DC.

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

SR-401-02 Filtration Efficiency of Yellow Sand Mask, Surgical Mask, and Handkerchief. C. Yoon, H. Jung, J. Kim, J. Lee, J. Kim, Seoul National University, Seoul, Republic of Korea; S. Lee, APAC Laboratory, 3M Korea, Seoul, Republic of Korea.

11:30 a.m.-Noon

CS-104-03 The Development of an EHS Database Program. M. Markopoulos, Wright State University, Dayton, OH.

Noon-12:30 p.m.

CS-104-04 Of Mice and Men: Improving Employee Health and Safety in Laboratory Animal Facilities. N. Greeson, E. King, Duke University, Durham, NC.

RT 204

Recent Advances in Sampling and Analytical Methods

10:30 a.m.-12:30 p.m. | Palais, 511c

Arranger: M. Eide, retired OSHA, Boise, ID. **Moderator:** J. Lesage, IRSST, Montréal, QC, Canada. **Monitors:** P. Kostle, University of Iowa, Iowa City, IA; A. Iske, University of Central Missouri, Kansas City, MO.

To compete in this economy, industries develop new technologies and processes creating new industrial hygiene sampling challenges for the industrial hygienist. In response, government, university, manufacturers, and private AIHA-accredited industrial hygiene laboratories are constantly developing new sampling methods, analytical methods, and strategies to provide tools for the industrial hygienist to monitor workplace exposures. This roundtable will present recently developed solutions to sampling problems. These new methods are in response to customer inquiries, response

to needs identified due to large number of sample requests, need for convenient sampling devices to measure exposures in response to regulations, and need for more sensitivity and selectivity in quantification of workplace chemical exposures.

- **Development of a Diffusive Sampler for Vapor-Phase Hydrogen Peroxide (VHP).** C. Manning, Assay Technology, Inc., Livermore, CA.
- **Comparison of Field-Portable Measurements of Ultrafine TiO₂: X-Ray Fluorescence, Fourier-Transform Infrared Spectroscopy, and Laser-Induced Breakdown Spectroscopy.** R. LeBouf, NIOSH, Morgantown, WV.
- **A New Air Sampling Device for Isocyanates in Both Vapor and Particulate Phase.** J. Brown, Supelco/Sigma-Aldrich, Bellefonte, PA.
- **Converting Standard HPLC Analytical Methods to UHPLC Methods in Order to Increase Peak Efficiency, Decrease Run Times, and Decrease Solvent Usage.** M. Jordan, Galson Laboratories, East Syracuse, NY.
- **New Analytical Methods Using LC-MS.** S. Aubin, IRSST, Montréal, QC, Canada.

PO 105

Nanotechnology I

11:00 a.m.-12:30 p.m. | Palais, 510b

Arranger/Moderator: C. Tsai, University of Massachusetts Lowell, Lowell, MA. **Monitors:** K. Sheffield, Phillips 66, Bartlesville, OK; J. Dimitri, IBM, Yorktown Heights, MA.

WITHDRAWN: **SR-105-01 Exposure Properties of Nanoparticles for the Semiconductor Manufacturing Industry.** K. Choi, J. Kim, J. Park, K. Kim, Samsung Electronics, Yongin City, Republic of Korea; D. Woo, J. Jung, G. Bae, Korea Institute of Science and Technology, Seoul, Republic of Korea; S. Kim, Kangbuk Samsung Hospital, Seoul, Republic of Korea.

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

CS-105-02 Nickel Titanium Nanoparticles Generated by Femto-second Laser Ablation.

C. Beaucham, K. Martinez, NIOSH, Cincinnati, OH.

11:30 a.m.-Noon

SR-105-03 Direct-Reading Hand-held X-Ray Fluorescence (XRF) Spectrometry Method Compared with Conventional Integrated Sampling for Determination of Airborne Cadmium.

F. Akbar-Khanzadeh, University of Toledo, Toledo, OH; J. Rowell, First Solar Inc., Perrysburg, OH.

Noon-12:30 p.m.

CS-105-04 Exposure Assessment and Evaluation of Engineering Control Effectiveness During Nanomaterial Reactor Cleanout. C. Sparks, A. Garcia, K. Martinez, NIOSH, Cincinnati, OH.

RT 205

Active Fall Protection: An International Perspective

10:30 a.m.-12:30 p.m. | Palais, 516a

Arranger/Moderator: P. Zoubek, Zoubek Consulting, LLC, San Diego, CA. **Monitors:** S. Fess, Xerox Corporation, Webster, NY; N. Orr, Becton Dickinson & Company, Franklin Lakes, NJ.

Worker fall protection is a global issue pertaining to safeguarding the worker from falls from elevated surfaces. Active fall protection is defined as a system that requires the use of a personal fall arrest system. The evolution of active fall protection requirements outlined in ANSI Z359 Fall Protection Code, ISO, Canadian, European, and U.S. fall protection standards have required contributions from experts all over the world. This roundtable will examine active fall protection requirements from experts with global experience. It includes fall protection professional engineers who have had input in the ANSI Z359 development, and a former chair of the Canadian Delegate to the ISO and chair of the CSA Z259 committee. Real-world examples will be applied to both regulatory and consensus standard requirements encompassing the safety challenges that may be encountered by the EOSH professional responsible for global fall protection issues.

- **The Knowledge Limit State: Human Factors in Fall Protection.** W. Parsons, Parsons Engineering Group, St. Johns, NL, Canada.
- **Is Gravity Different Where You Live? – A Brief Comparison of International Fall Protection Regulations and Standards.** G. Small, High Engineering Corp., Calgary, AB, Canada.
- **Standards and Selection Criteria for an Efficient Active Fall Arrest System.** J. Arteau, University of Quebec, Montréal, QC, Canada.
- **Test Methods for Guardrails: A Brief Review of International Regulations and Standards.** A. Lan, IRSST, Montreal, Canada.

RT 207

Implementation of Industrial Hygiene Database Systems — Experiences and Lessons Learned

10:30 a.m.-12:30 p.m. | Palais, 513d

Arranger: M. Melkonian, Medgate, Toronto, ON, Canada. **Moderator:** L. Bridges, KBR, Houston, TX. **Monitors:** A. Cutz, Health+Safety Matters & Associates, Markham, ON, Canada; H. Chan, Marathon Petroleum, Findlay, OH.

Industrial hygienists are faced with managing a growing volume and complexity of data. It is this data that we rely upon to make sound judgments in the pursuit of ensuring the health and safety of workers and the general public. Many organizations do not employ a centralized approach when managing

occupational health and safety data. Many still employ disparate databases, Excel spreadsheets, and paper-based systems. This can result in the potential for inconsistent, fragmented data that hinders the industrial hygienist's ability to effectively track, manage, and report occupational health and safety data. Finding and utilizing a database that integrates occupational health and safety data can significantly enhance data quality and efficiency within your organization. There are many database solutions ranging from homegrown systems to third-party off-the-shelf systems. This roundtable will present real-life implementation experiences and lessons learned to help others who may be seeking to successfully find and implement an industrial hygiene database system.

- **DOE Experiences and Lessons Learned in Implementing "Real-Time" Data Management Systems for Industrial Hygiene and Electronic Health Records.** D. Field, Department of Energy, Washington, DC.
- **Implementing and Improving IH Systems.** S. Battista, 3M, St. Paul, MN.
- **Transition from a Homegrown IH Database to a Third-Party Web-Hosted IH Database.** B. Martin, CSX, Jacksonville, FL.
- **Rolling out an Enterprise EHS Software System — Lessons Learned.** D. Risi, Spiramid, Chantilly, VA.

RT 201

Ergonomic Analysis Tools: North American Perspectives

10:30 a.m.-1:00 p.m. | Palais, 510a

Arranger/Moderator: S. Gibson, Ergonomics Applications, Salem, SC. **Monitors:** S. Gutmann, Thomson-Reuters, White Bear Lake, MN; R. Thomas, Auburn University, Auburn, AL.

For ergonomics to become more accepted as science, it is necessary that industrial hygienists and ergonomists utilize objective, validated risk assessment models. There are a number of good peer-reviewed ergonomic analysis tools, but they are more commonly used in countries outside the U.S. (although many were developed here). This roundtable will discuss other countries' approaches to ergonomic risk assessment and how they differ from the current U.S. philosophy. Some of the different tools will be presented.

- **Ergonomic Risk Assessment Tools: What Is Currently Available.** S. Bao, Washington State Dept. of Labor & Industries, Olympia, WA.
- **Taking Research into the Workplace: The Process and the Latest.** D. Pinchevsky, NexGen Ergonomics, Pointe Claire, QC, Canada.
- **New Ergonomic Assessment Tools: The Latest Research.** R. Wells, University of Waterloo, Waterloo, ON.
- **Actual Applications in the Workplace.** L. Nystrom, DuPont, Wilmington, DE.

RT 202

Implementing a "Buy Quiet" Strategy for Noise Reduction

10:30 a.m.-1:00 p.m. | Palais, 710b

Arranger/Monitor: G. Burdige, Concurrent Technologies Corp., Lemoyne, PA. **Moderator:** C. Johnson, 3M, St. Paul, MN. **Monitor:** J. Kunz, 3M, St. Paul, MN.

Noise is the most prevalent occupational hazard both within industry and the military. Compensation payments exceeding a billion dollars a year paid by the Veterans Administration to persons with auditory acuity injuries generally derived from exposures sustained during military service is a case in point. Intervention strategies for reducing fiscal and human costs are needed. Identifying and using the best noise control technologies is a component of workplace loss prevention. A Buy Quiet program was developed by the U.S. EPA in the late 1970s and early 1980s. Interest in Buy Quiet, including low vibration powered hand tools has intensified over the past several years, and NIOSH reactivated the buy quiet concept. The NASA Buy Quiet program was initiated in 2009. NASA field centers are required to maintain site-specific Buy Quiet programs that guide the identification, evaluation, and procurement of low-noise products. Buy Quiet programs establish policy and procedures to select and procure tools and machinery with the lowest emitting noise or vibration.

- **Development of Procurement Standards and a Balanced Scorecard for Reducing Noise, Vibration and Life-Cycle Costs in Power Hand Tool Evaluation, and Procurement.** M. Persson, Atlas Copco Industrial Technique AB, Stockholm, Sweden.
- **WITHDRAWN: NASA Buy-Quiet Process Roadmap: A Web-Based Application Supporting Procurement of Low-Noise Equipment in the Context of a Hearing Conservation Program.** G. Camomilli, NASA, Kennedy Space Center, FL.
- **Tools for "Buy Quiet."** D. Westrum, 3M, Hutchinson, MN.
- **A "Buy Quiet" Success Model as a Component of a Total Noise Control Program for a Department of Energy Construction Site.** W. Jones, Laborers' Health and Safety Fund of North America.
- **Experience With "Buy Quiet" for a Global Manufacturing Company.** J. Downey, Colgate-Palmolive, Lawrence, KS.

CR 303

LEED EB: O&M Greening Existing Buildings

11:30 a.m.-12:30 p.m. | Palais, 520c

Presenter: D. Walsh, Walsh Certified Consultants, Inc., Las Vegas, NV.

The U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) rating system for Existing Buildings: Operations and Maintenance (EB:O&M) will be summarized with an emphasis on its environmental aspects. The program will include a summary of the history of the USGBC and LEED basics, the value of LEED EB:O&M, what is needed to qualify for LEED EB:O&M, then discussion of the basics of the LEED EB:O&M Prerequisites and Credits.

CR 304

Measuring Safety Performance with Leading Indicators

11:30 a.m.-12:30 p.m. | Palais, 520b

Presenter: J. Leyland, Safety Performance Services, Hamilton, ON, Canada.

Measuring safety performance provides assurance to senior management and the Board of Directors that OHS is being managed effectively. Participants will be provided with proven examples of effective leading indicator measures that they can take back and use on the job. Feedback from previous presentations shows that participants planned to use the information provided to convince CEOs and other executives to include leading indicators as part of corporate safety measures.

Luncheon Discussions

EV 03 SOLD OUT

IH Mysteries Workshop

12:30 p.m.-2:00 p.m. | Palais, 512a

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

EV 04 SOLD OUT

Occupational Exposure Limit Setting — Is There a Future?

12:30 p.m.-2:00 p.m. | Palais, 512e

Moderators: C. Laszcz-Davis, The Environmental Quality Organization, LLC, and Affiliate, Aluminium Consulting Engineers, LLC, Lafayette, CA; J. Perkins, UTHSC Houston School of Public Health, San Antonio, TX

Jeffrey S. Lee Lecture

Occupational Cancer: Current Knowledge and Research Priorities

12:30 p.m.-1:30 p.m. | Palais, 518

Presenter: Paul A. Demers, PhD, Director of the Occupational Cancer Research Centre, based within CCO; Scientific Director of CAREX Canada, a national workplace and environmental carcinogen surveillance program based at the University of British Columbia.



Occupational cancer has been an active field of research for many decades. Currently there are approximately 60 definite (Category 1) or probable (Category 2A) workplace carcinogens, as defined by the International Agency for Research on Cancer (IARC). These include many common workplace agents that hundreds of thousands of workers are regularly exposed to, including industrial chemicals, metals, fibers, particulates, radiation, and products of combustion. In addition, there are many more suspected carcinogens. As with the established carcinogens, this is also a very diverse set of substances, including pesticides, chlorinated solvents, and fine particles. This lecture will provide a brief overview of the common known and suspected workplace carcinogens and will identify some major

data gaps and new developments in occupational cancer research, as well as the research and evaluation priorities of organizations such as IARC and NIOSH.

Student Table Topics

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

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

- **CIH Exam 101**, Facilitators: Nicole M. Greeson, CIH, Duke University, Hillsborough, NC; Lynn C. O'Donnell, CIH, American Board of Industrial Hygiene, Lansing, MI
- **Field Work and Travel for the IH**, Facilitator: Ted N. Grigorief, Findlay, OH
- **Networking for the IH**, Facilitator: Cathy A. Hovde, Caterpillar, Crystal, MN
- **Breaking Down Barriers**, Facilitator: Members of AIHA Fellows SIG

RT 208

Asbestos Risk Assessment in International Practice: Is This a Settled Issue?

1:00 p.m.-5:00 p.m. | Palais, 710a

Arrangers: A. Korchevskiy, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO; J. Rasmuson, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO. **Moderator:** B. Heckman, LaCroix Davis LLC, Carlisle, PA. **Monitors:** S. Chiusano, U.S. Department of Defense, Arlington, VA; L. Stiles, Sandia National Laboratories, Albuquerque, NM.

In the 21st century, asbestos remains a serious and somewhat controversial occupational and environmental hazard. In spite of public pressure to ban chrysotile asbestos, it is still being produced in China, the former Soviet Union, and elsewhere. Asbestos-related disease claims remain the number one toxic tort issue in the world. The development of

Exhibitor Product Demos and Presentations

1:00 p.m.-2:00 p.m. | Expo Theater

1:00 p.m.

EVAHL PAPR for Hazardous Classified Locations, Bullard

This presentation will demonstrate Bullard's new EVAHL PAPR for Hazardous Classified Locations and will cover the regulations surrounding the use of portable battery-powered devices in potentially explosive environments.

1:30 p.m.

A Passive Sampling Solution for the New Nitrogen Dioxide TLV, SKC Inc.

In 2012, a new TWA-TLV® for nitrogen dioxide of 0.2 ppm was adopted by ACGIH®. SKC is pleased to offer a passive sampling solution for evaluating this contaminant at TLV levels. The SKC UMEX 200 sampler incorporates the proven chemistry of OSHA Method ID-182 into a lightweight passive device for analysis by ion chromatography. New validation studies document reliable performance of this sampler at the ACGIH TLV levels or at OSHA ceiling values.

effective risk assessment approaches for different asbestos fiber types is critical to help address these issues. Yet, public health agencies worldwide have not yet agreed on a universal approach. In the last two decades, landmark works in the field of asbestos risk quantification have been published in the U.S. and the U.K. that have incorporated epidemiological data from seven separate countries. The roundtable will provide a unique opportunity to discuss asbestos risk assessment from several opposing viewpoints. The overall objective of this session is to provide practicing occupational hygienists with an understanding of the current state of the art and an international perspective of asbestos exposure reconstruction and risk assessment models. A time for audience questions and discussion will be provided.

- **Exposure Reconstruction and Its Role in Asbestos Risk Modeling.** F. Boelter, ENVIRON, Chicago, IL.
- **Comparative Review of Risk Assessment Approaches and Models.** J. Rasmuson, Chemistry and Industrial Hygiene, Inc., Wheat Ridge, CO.
- **The Role of Asbestos Fiber Size and Mineral Type in Cancer Potency Determination.** D. Berman, Aeolus, Inc., Albany, CA.
- **Chrysotile Asbestos and Cancer Risks: Facts and Hypothesis.** J. Pierce, ChemRisk, Chicago, IL.
- **Fiber Analysis Vignettes: Electron Microscopy to the Rescue.** V. Roggli, Duke University, Durham, NC.
- **The Process of Quantitative Epidemiological Meta-Analysis in Asbestos-Related Cancer Epidemiology.** A. Damton, Health & Safety Executive, Bootle, U.K.
- **What Is the True Potency Difference Between Chrysotile and Amphibole Asbestos from a Scientific Standpoint? From a Public Health Perspective?** J. Hodgson, Health & Safety Executive, Liverpool, U.K.
- **Asbestos Risk Assessment: The Scientific Basis of the "Mount Sinai School" Perspective—A Historical Vignette.** A. Fischbein, BSD Biomedical LLC, USA and Israel.
- **Asbestos Health Issues in Russia: What We Know and What We Don't.** A. Korchevskiy, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

PO 107

An Eclectic Collection of Presentations Reflecting Social Concerns

1:30 p.m.-5:00 p.m. | Palais, 511b

Arranger: S. Shepherd, MA Department of Labor Standards, Westborough, MA. **Moderator:** C. Becnel, DM Petroleum, New Orleans, LA. **Monitors:** A. Cutz, Health + Safety Matters & Associates, Markham, ON, Canada; J. Grassman, Brooklyn College-CUNY, Brooklyn, NY.

1:30 p.m.-2:00 p.m.

SR-107-01 Safety and Health at Work as a Factor of Competitiveness of Organizations. M. Corticeiro Neves, ISLA Leiria, Carvide, Portugal.

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

CS-107-03 Social Media. The World. And OSHA? M. Hatch, OSHA, Washington, DC.

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

SR-107-02 Workplace Fatalities Are Not What You Think! The Rise of Occupational Cancer. P. Demers, A. Del Bianco, Occupational Cancer Research Centre, Toronto, ON, Canada.

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

SR-107-04 Health and Safety in Small Auto Collision Repair Shops — Outcomes of a 1-Year Intervention. A. Bejan, D. Parker, M. Skan, Park Nicollet Institute, Minneapolis, MN; L. Brosseau, University of Minnesota, Minneapolis, MN.

3:30 p.m.-4:00 p.m.

SR-107-05 Safety Programs, Workplace Safety Conditions and Employee Safety Practices in Auto Collision Repair Businesses. L. Brosseau, University of Minnesota, Minneapolis, MN; A. Bejan, D. Parker, M. Skan, Park Nicollet Institute, Minneapolis, MN.

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

CS-107-06 Violence Prevention in the Workplace. B. Saravanabawan, W. Eng, HRSDC Labour Program, Ottawa, ON, Canada.

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

SR-107-07 Occupational Health Problems of Waste Collectors and the Validity of Installation of Washing Facilities in the Workplace in Korea. K. Ha, Changwon National University, Changwon, Gyungnam, Republic of Korea; D. Park, Korea National Open University, Seoul, Republic of Korea; S. Kim, Wonjin Institute for Occupational and Environmental Health, Seoul, Republic of Korea.

PO 108

Innovative Approaches to Exposure Assessment

1:30 p.m.-5:00 p.m. | Palais, 511a

Arranger: A. Weikert, W.L. Gore and Associates, Inc., Forest Hill, MD. **Moderator:** D. Drolet, IRSST, Montréal, QC, Canada. **Monitors:** W. Max, Battelle Memorial Institute, Atlanta, GA; P. Aigeldinger, W.L. Gore and Associates, Inc., Elkton, MD.

1:30 p.m.-2:00 p.m.

SR-108-01 Measuring Workplace Stress — A Pilot Study. J. Oudyk, Occupational Health Clinics for Ontario Workers Inc. (Hamilton Clinic), Hamilton, ON, Canada; T. Aversa, Ontario Public Service Employees Union, Toronto, ON, Canada.

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

CS-108-02 Analysis of Formaldehyde Levels in Textiles — Establishing a Protective Value PPM Concentration. H. Montanari, Bemis Associates, Shirley, MA.

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

WITHDRAWN: CS-108-03 Evaluation of Precautionary Control Bands for Occupational ELF Magnetic Fields in Dutch Workplaces. J. Bowman, NIOSH, Cincinnati, OH; Y. Christopher, Utrecht University, Utrecht, Netherlands.

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

SR-108-04 Measurement of Airborne Asbestos Fiber Settling Rates in a Simulation Study of Clothes Handling. J. Sahmel, C. Barlow, ChemRisk, Inc., Boulder, CO; A. Burns, P. Scott, ChemRisk, Inc., Pittsburgh, PA; A. Madl, ChemRisk, Inc., Aliso Viejo, CA; J. Henshaw, ChemRisk, Inc., Sanibel, FL; D. Paustenbach, ChemRisk, Inc., San Francisco, CA.

3:30 p.m.-4:00 p.m.

SR-108-05 Evaluation of Potential Para-Occupational Exposure to Chrysotile Asbestos During Laundering Activities Through a Simulation Study. S. Gaffney, B. Donovan, D. Paustenbach, ChemRisk, LLC, San Francisco, CA; J. Sahmel, C. Barlow, ChemRisk, LLC, Boulder, CO; A. Madl, ChemRisk, LLC, Aliso Viejo, CA; J. Henshaw, ChemRisk, LLC, Sanibel, FL; R. Lee, D. Van Orden, RJ Lee, Inc., Monroeville, PA.

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

SR-108-06 A New Method for Assessing Indoor Exposure to Asbestos. J. Thornburg, R. Chartier, RTI International, Research Triangle Park, NC; J. Kominisky, Environmental Quality Management, Inc., Cincinnati, OH; W. Barrett, U.S. EPA, Cincinnati, OH.

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

CS-108-07 Impediments to Developing a Viable Crystalline Silica Exposure Assessment Program. M. Pannell, U.S. Army, Springfield, VA.

SS 001

Emerging Challenges in Upstream Oil and Gas Operations

1:30 p.m.-5:00 p.m. | Palais, 510b

Arranger: M. Denhoff, Husky Energy Inc., Calgary, AB, Canada. **Moderator:** A. Johnson, WorkSafeBC, Richmond, BC, Canada. **Monitors:** M. Fung, Humber College Institute of Technology & Advanced Learning, Toronto, ON, Canada; G. Lachapelle, Rio Tinto Alcan, Montréal, QC, Canada.

This roundtable will provide an opportunity to hear from key industry, government, and consulting Occupational Hygienists on current scientific knowledge and practical field experience relating to emerging challenges in the upstream oil and gas sector. The session will focus primarily on the Canadian upstream industry but will include discussion of offshore oil and gas platforms located in other parts of the world. Changes to allowable exposures for Hydrogen Sulfide and the rapid expansion of "fracking" operations and associated crystalline silica exposures are some of the topics that will be presented.

- **Determinants of Exposure for Crystalline Silica and Benzene in the Oil and Gas Industry.** R. Waterhouse, Encana Corporation, Calgary, AB, Canada.
- **Exposure to Crystalline Silica in the Alberta Upstream Oil and Gas Industry.** D. Radnoff, Alberta Workplace Health & Safety, Edmonton, AB, Canada.
- **Managing Industrial Hygiene Exposures in Oil Sands Operations.** S. Samuel, Suncor Energy Services Inc., Calgary, AB, Canada.
- **Observations on Industrial Hygiene Management on a Wide Variety of Offshore Oil and Gas Platforms.** J. Singh, Golder Associates, Inc., Kamuela, HI.
- **Risk Assessment of Occupational Exposure to Hydrogen Sulfide During Pigging Operations in Oil and Gas Operations.** P. Joseph, Industrial Safety International, Calgary, AB, Canada.
- **Regulatory Issues in Upstream Oil & Gas in North Eastern British Columbia, Canada.** S. Tye, WorkSafeBC, Richmond, BC, Canada.

CR 305

It's 1:00 a.m. and There Are 38,000 Pounds of Spilled Material Outside the Plant. What Would You Do?

2:00 p.m.-3:00 p.m. | Palais, 516d

Presenter: K. Peterson, Safetec Compliance Systems, Inc., Vancouver, WA.

Environmental spills are not all created equally. This session is designed to teach the EHS manager how to properly design effective spill prevention plans, how to determine what EPA regulations apply to a release (EPCRA, CAA, CWA, RCRA), what agencies to notify and when to notify, and how to develop effective contingency plans in the event that a spill does occur.

PO 109

Aerosols I

2:00 p.m.-4:30 p.m. | Palais, 520a

Arranger/Moderator: M. Isenstein, U.S. Army, Japan.
Monitors: M. Murphy, 3M, St. Paul, MN; M. Sheehan, West Chester University, West Chester, PA.

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

SR-109-01 Measurement of Specific Airborne Actinobacteria in Composting Facilities Using a Newly Developed qPCR Method. P. Duquenne, L. Betelli, X. Simon, INRS, Vandoeuvre-les-Nancy, France; E. Géhin, Université Paris-Est (CERTES), Créteil, France; F. Grenouillet, UMR CNRS 6249 Chrono-Environnement, Besançon, France; A. Hartman, INRA, Dijon, France.

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

SR-109-02 A Count-Based Method for Improved Quality Control Acceptance Limits of EMLAP Air Direct Fields of Testing. M. Saleh, Sporometrics, Toronto, ON, Canada.

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

SR-109-03 Characterisation of the Fungal Bioaerosols Emitted by Workers' Activities in a French Artisanal Cheese Factory. X. Simon, P. Duquenne, G. Greff, C. Coulais, V. Koehler, Institut National de Recherche et de Sécurité (INRS), Vandoeuvre-les-Nancy, France; C. Mialon, Centre Interrégional de Mesures Physiques d'Auvergne (CIMPA - CARSAT Auvergne), Clermont-Ferrand, France.

3:30 p.m.-4:00 p.m.

SR-109-04 Regional Descriptors for Combining Outdoor Fungal Aerosol Data. H. Burge, EMLab P&K, Novato, CA.

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

CS-109-05 Comparison of Worker Exposure Monitoring Methods for Asphalt Bitumen Used in Road Paving in Alberta. D. Radnoff, Alberta Human Services, Edmonton, AB, Canada.

PO 110

Legal, Regulatory, Guidelines, Standards

2:00 p.m.-5:00 p.m. | Palais, 513a

Arranger/Moderator: D. Dahlstrom, Exponent, Bellevue, WA. **Monitors:** M. Austin, University of Minnesota, Minneapolis, MN; S. Sherman, U.S. Department of State, Washington, DC.

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

CS-110-01 Legal Aspects of IH Testing from the Industrial Hygienist's Perspective. R. Harvey, Bureau Veritas, Downers Grove, IL.

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

CS-110-02 Legal Aspects of IH Testing from the Attorney's Perspective. G. Dale, Faegre Baker Daniels LLP, Indianapolis, IN.

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

SR-110-03 Data Quality Assessment: Enriching Balzer & Cooper and P.G. Harries. J. Persky, F. Boelter, ENVIRON, Chicago, IL.

3:30 p.m.-4:00 p.m.

CS-110-04 New OSHA Compliance Instruction for the Revised Hazard Communication Standard. D. Williams, OSHA, Washington, DC.

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

CS-110-05 Experience on the Front Lines for Enabling GHS Global Compliance. F. Trudeau, IHS, St. Laurent, QC, Canada.

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

CS-110-06 GHS Training for Millennials (and Everyone Else). M. McGowan, E. Scala-Hampson, Hydrogeologic Inc., Reston, VA.

PO 111

Respiratory Protection I

2:00 p.m.-5:00 p.m. | Palais, 513d

Arranger: L. Janssen, Larry Janssen Consulting, LLC, Stillwater, MN. **Moderator:** N. Gaydos, PPG, Pittsburgh, PA. **Monitors:** E. DeMedeiros, North Safety Products, Cranston, RI; P. Swearengen, Avon Protection Systems, Cadillac, MI.

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

SR-111-01 Breakthrough Curves for Toluene Adsorption on Different Types of Activated Carbon Fibers: Application on Respiratory Protection. J. Balaney, East Carolina University, Greenville, NC; C. Lungu, University of Alabama at Birmingham, Birmingham, AL.

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

SR-111-02 Respiratory Cartridge Service Life: Validation of the Small Scale Cartridge (SSC) Experimental Approach. L. Tuduri, Y. Cloutier, D. Drolet, Institut de Recherche en Santé et Sécurité au Travail, Montréal, QC, Canada; F. Janvier, J. Lara, Université de Montréal, Montréal, QC, Canada; D. Cossement, Université du Québec à Trois Rivières, Trois Rivières, QC, Canada.

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

CS-111-03 Committee Award: John M. White Award. N. Gaydos, PPG Industries, Inc., Monroeville, PA. John M. White Award to be presented.

3:30 p.m.-4:00 p.m.

SR-111-04 How Does Breathing Frequency Affect the Filter Efficiency of an N95 Filtering Facepiece Respirator? X. He, S. Grinshpun, T. Reponen, University of Cincinnati, Cincinnati, OH.

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

SR-111-05 Performance Evaluation of N95 Filtering Facepiece Respirators with Exhalation Valves Using Two New Test Methods. C. Yiitalo, P. Martin, D. Japuntich, S. Roscoe, 3M Company, St. Paul, MN.

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

SR-111-06 Fitting Characteristics of N95 Filtering-Facepiece Respirators Used Widely in China. L. Jiang, Y. Yu, Y. Liu, W. Chen, Huazhong University of Science and Technology, Wuhan, China; Z. Zhuang, NIOSH, Pittsburgh, PA; J. Liu, M. Yang, Guangzhou Occupational Safety & Health Safety Technology Co., Ltd, Guangzhou, China.

PO 112

Stewardship/Sustainability

2:00 p.m.-5:00 p.m. | Palais, 514

Arranger/Monitor: P. Harper, ENVIRON, Phoenix, AZ. **Moderator:** C. Briggs, ENVIRON, Boston, MA. **Monitor:** M. Finn, ENVIRON International Corporation.

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

CS-112-01 Product Stewardship in Early Research & Development: Enhancing Productivity and Adding Value to the Innovation Pipeline. M. Joerger, DuPont, Wilmington, DE.

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

CS-112-02 Implementing a Companywide “2015 Environmental Sustainability Goal” at the Personal Level. S. Wollschlager, 3M, St. Paul, MN.

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

WITHDRAWN CS-112-03 Case Study/Professional Practice — Global Product Stewardship Policy and Implications. R. Martin, Global Product Stewardship Council, Turramurra, Australia.

3:30 p.m.-4:00 p.m.

SR-112-04 Tire Industry Project — An Industry-Wide Product Sustainability Initiative. J. Panko, M. Kreider, K. Unice, ChemRisk, Inc., Pittsburgh, PA.

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

CS-112-05 Characterizing Potential Chemical Exposures and Associated Risks from Food Packaging: A Product Stewardship Challenge. P. Sheehan, K. Bogen, M. Posson, Exponent, Oakland, CA; J. Hellerstein, MeadWestvaco, Richmond, VA.

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

CS-112-06 Managing Exposures to High-Temperature Insulation Wools Through a Comprehensive Product Stewardship Program. P. Snodgrass, Unifrax Corporation, Tonawanda, NY; S. Chen, Thermal Ceramics, Augusta, GA; M. Richard, Unifrax Corporation, New Carlisle, IN.

PO 113

Topics in Occupational Health

2:00 p.m.-5:00 p.m. | Palais, 515

Arrangers: J. Ingram, CCSF Health Department, San Francisco, CA; S. Rabinovitz, Sandler Occupational Medicine Associates, Inc., Gaithersburg, MD.

Moderator: W. Lashbrook, DeVany Industrial Consultants, Vancouver, WA. **Monitors:** S. Siu, 3M, London, ON, Canada; B. Dawson, Talisman Energy USA.

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

SR-113-01 Effects of a Series of Ketone Compounds on Liver Microsomal Carboxylesterase Activity in Mice? — What Are the Implications for Workers? W. Luttrell, Oklahoma Christian University, Edmond, OK.

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

SR-113-02 Neutralization of Interleukin-1 β Extenuate Silica-Induced Lung Inflammation and Fibrosis in the C57bl/6 Mice. J. Guo, N. Gu, W. Chen, Huazhong University of Science and Technology, Wuhan, China; J. Chen, China Medical University, Wuhan, China; T. Shi, Institute of Health Surveillance, Analysis and Protection, Wuhan, China.

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

CS-113-03 Can Occupational Exposure to Rock Wool Be Associated with the Development of Mesothelioma? J. Oudyk, Occupational Health Clinics for Ontario Workers Inc. (Hamilton Clinic), Hamilton, ON, Canada.

3:30 p.m.-4:00 p.m.

SR-113-04 Ototoxic Notation: A New Occupational Notation Proposed by French OEL Committee. M. El Yamani, ANSES French Agency for Food Environmental and Occupational Health & Safety, Maisons-Alfort Cedex, France.

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

SR-113-05 Manganese in the Citrate Serum Fraction Is a Good Indicator for Welders' Exposure. G. Lidén, Stockholm University, Stockholm, Sweden; B. Michalke, L. Aslanoglou, Helmholtz Zentrum München — German Research Center for Environmental Health, München, Germany; P. Berg, G. Mölleby, B. Bergström, Örebro University Hospital, Örebro, Sweden; G. Säwemark, ESAB, Gothenburg, Sweden; P. Sundberg, Elga AB, Partille, Sweden.

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

SR-113-06 Variability and Trajectory of Multiple Blood Lead Measures Among Construction and Manufacturing Workers. J. Blando, Old Dominion University, Norfolk, VA; S. Lu, H. Gu, Y. Lin, B. Marshall, University of Medicine and Dentistry of NJ (UMDNJ), Piscataway, NJ.

RT 209

Confined Space Entry: Challenges and Solutions

2:00 p.m.-5:00 p.m. | Palais, 516a

Arranger/Moderator: M. DeVany, DeVany Industrial Consultants, Vancouver, WA. **Monitors:** N. Pearce, NFPA, Quincy, MA.; C. Muncy, Montgomery County Environmental Services, Kettering, OH.

In this eighth annual challenging CS roundtable, seasoned CS entry experts not only explore the hazards of work performed in confined spaces and what can go wrong but also present solutions to help eliminate or at least control injurious and fatal outcomes. Because workers entering confined spaces are not always trained to recognize when the work to be done can change the confined space from safe to potentially fatal, not reclassifying the non-permit required confined space into a permit-required one can sometimes be a deadly mistake. This is an issue not just in general industry but also in the construction industry where a Confined Space Program and worker training have yet to be made mandatory in many places. The last part of this roundtable will be open to attendees, who are invited to present troubling and/or complicated confined space issues to the panel for discussion, suggestions, and advice.

- **What Can Possibly Go Wrong When You Bring a 16-Foot Steel Measuring Tape to a 21-Foot Deep Sanitary Sewer Manhole?** V. Brown, ENMET Corp., Ann Arbor, MI.
- **Oxyacetylene Cutting at the Far End of a Buried, 45m Long, 0.9m Diameter, Horizontal Steel Pipeline.** N. McManus, NorthWest Occupational Health & Safety, North Vancouver, BC, Canada.

- **Ready to Rescue?** M. Palmer, EnSafe Inc., Knoxville, TN.
- **Implementing a New Confined Space Program at a 30-Year-Old Non-Profit Organization: New York's Central Park Conservancy.** S. Adam, Central Park Conservancy, New York, NY.
- **Challenges and Solutions: Combining the General Industry and Construction Confined Space Standards in Oregon.** S. Thomas, Oregon OSHA, Bend, OR.

RT 210

Cut It Out! Noise Control Solutions

2:00 p.m.-5:00 p.m. | Palais, 710b

Arranger/Moderator: S. Battista, 3M, Maplewood, MN. **Monitors:** C. Johnson, 3M, St. Paul, MN; J. Hauge, 3M, Maplewood, MN.

What drives noise control in 2013? Often, it is the desire to eliminate work-induced noise exposure. On analysis, many noise controls make good economic sense because they save energy and reduce costs. Our speakers will discuss innovative and proven noise control solutions that they have implemented effectively in a range of workplaces — from laboratories and pilot plants to manufacturing and oil and gas exploration.

- **Hearing Is Believing, Real Noise Control Solutions You Can Hear.** E. Miller-Klein, SSA Acoustics, LLP, Seattle, WA.
- **3M Prairie du Chien Noise Control Program.** C. Frey, 3M, Prairie du Chien, WI.
- **BP Exploration (Alaska)'s (BPXA) Experience with Noise Control Applications in Oil and Gas Processing Facilities.** J. Mlynck, BP Exploration Alaska, Anchorage, AK.
- **Noise Controls in Laboratories and Pilot Plants.** A. Rice, 3M, Maplewood, MN.
- **Compressed Air Systems and Devices: The #1 Noise Problem in Industry, and Proven Engineering Controls.** D. Driscoll, Associates in Acoustics, Evergreen, CO.

RT 211

Environmental Disinfectants: Selecting the Right One for the Right Job

2:00 p.m.-5:00 p.m. | Palais, 511c

Arranger/Moderator: S. Carry, Kaiser Permanente, Oakland, CA. **Monitors:** L. Kaneshige, Kaiser Permanente, Oakland, CA; V. Puhlovich, Kaiser Permanente, Pasadena, CA.

Emerging superbugs such as MRSA and *Clostridium difficile* have generated a sense of urgency to select the most potent biocide to clean surfaces and equipment. During the quest for the perfect biocide, attributes such as efficacy, compatibility, and health hazards may be overlooked. This roundtable presents an opportunity to understand the dynamics between infection control and industrial hygiene principles to select an appropriate biocide that inactivates the infectious agent and minimizes the potential for occupational and public health exposures.

- **The Infection Control Perspective: Definitions and Criteria for Selection of Disinfectants Used in Health Care.** S. Hess, Fletcher Allen Health Care, Burlington, VT.
- **Balancing the Competing Needs of Disinfectant Efficacy and Safety.** G. Byrns, Illinois State University, Normal, IL.
- **A Comparison of Hydrogen Peroxide vs. Aldehyde-Based High-Level Disinfectants.** E. Stewart, Kaiser Permanente, Oakland, CA.
- **Biocides Basics for Noncritical Applications.** C. Knezevich, Chemetall NAFTA, New Providence, NJ.
- **Cleaning Quality Assurance for Health Care Environments.** K. Thompson, 3M, St. Paul, MN.

RT 212

Surviving and Thriving Abroad: Experiences and Lessons Learned from Working Overseas

2:00 p.m.-5:00 p.m. | Palais, 519

Arranger: C. Hovde, Caterpillar Inc., Kiel, Germany. **Moderator:** M. Cheszek, Caterpillar, Brooklyn Park, MN. **Monitors:** K. Merritt, Safety and Quality Assurance Alliance, Hampton, VA; A. Steiner, Caterpillar, Prentice, WI.

Have you ever wondered why nobody speaks up on your global conference call? Or why there is so much resistance to a simple request to monitor exposures? Or what it's like to walk in the shoes of your counterparts overseas? The world is getting smaller; global corporations are struggling to provide support and coverage throughout their organization. We regularly work with process partners in different countries with different languages and cultures. We need to be able to work effectively and learn

from each other to be successful. The speakers will give examples and practical tips on the cultural challenges, language barriers, and professional opportunities of living and working abroad. These examples and tips will help professionals interested in working abroad as well as professionals who regularly work with people from other countries. Panel members will include Americans working in Europe and China, and Chinese, Latino, and African professionals working in the U.S.

- **Chicken Feet and Saving Face: Opportunities and Challenges of Working in Asia.** M. Andrew, Sumarra, Hong Kong, China.
- **Culture Jumper? ... Let's Have Fun with It!** Y. Zhen, Belzona, Miami Lakes, FL.
- **Das Leben is Kein Ponyhof ... and Other Adventures in Managing in a Foreign Language.** C. Hovde, Caterpillar Inc., Kiel, Germany.
- **Lost in Translation? How to Speak Safety and Hygiene in Latin America.** E. Shaw, Autoridad del Canal de Panama, Miami, FL.
- **First Professional Job in a Foreign Country.** Y. Luiza, University of Missouri, Kansas City, MO.
- **Unwritten Social Rules — What They Didn't Teach Us in Graduate School.** D. Nelson, University of Colorado at Boulder, Boulder, CO.

RT 213

An Overlooked Health Hazard: Fatigue

2:00 p.m.-5:00 p.m. | Palais, 510a

Arranger/Moderator: J. Keyes, CHESS, Inc., Woodbury, MN. **Monitors:** E. Satrun, Exxon Mobil Corporation, Joliet, IL; W. Long, ERG, Arlington, VA.

No occupational health standards specifically address fatigue, but it's been shown to be a major hazard. The U.S. Chemical Safety Board identified worker fatigue as a likely contributor to the BP Texas City oil refinery explosion in 2005. The U.S. Department of Transportation regulates how many hours truck drivers can be at work, in an attempt to limit fatigue. Although industrial hygienists are as familiar as anyone else with feeling fatigued, the profession has rarely addressed the hazard. The focus of this roundtable is specifically on fatigue in construction, where it becomes an issue when projects offer large bonuses for early completion, when work is scheduled for off-peak hours, or when time constraints, such as the onset of cold weather force longer work shifts. But the hazard applies to all workplaces that demand longer hours, nontraditional work shifts, or with round-the-clock operations. Speakers will address how fatigue affects employees' ability to work, what can be done to anticipate and recognize fatigue situations, and what control methods can be instituted by employers to control fatigue.

- **The Physiology of Fatigue.** M. Mallis, M3 Alertness Management, LLC, Pikesville, MD.

- **The Scope of the Problem: Increased Injuries and Extended Work Hours in Construction.** L. Goldenhar, CPWR: The Center for Construction Research and Training, Silver Spring, MD.
- **Managing Fatigue: Fatigue Risk Management Systems.** D. Buczek, DB&A, Fairfax, VA.
- **Managing Fatigue — Considerations in Developing Fatigue Risk Management Systems.** S. Lerman, Exxon Mobil Corp., Irving, TX.
- **Fatigue Management in Commercial Driving: Not Just Hours-of-Service Compliance.** R. Knipling, Safety for the Long Haul, Inc., Arlington, VA.

CR 306

Basic Workplace Fall Protection: A Commonsense Approach to Recognition and Control of Elevated Work Hazards

3:30 p.m.-4:30 p.m. | Palais, 516d

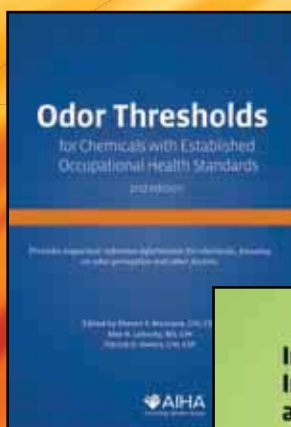
Presenter: P. Zoubek, Zoubek Consulting, LLC, San Diego, CA.

EOHS professionals are called upon to recognize and control a variety of workplace hazards. Relative to working on elevated surfaces, they have to recognize situations that may pose the risk of falls and suggest control measures, which come in many options. Revisions in ANSI Z359 Fall Protection Code demonstrate the importance of ensuring the worker is properly protected from falls. This session will outline basic fall protection options geared to the professional with little experience in the subject area.



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Tuesday, May 21

6:30 a.m.–8:00 a.m.

AIHF Fun Run/Walk

7:00 a.m.–5:30 p.m.

Registration, Palais, Viger Hall

7:30 a.m.–5:30 p.m.

Speaker Ready Room, Palais 516c

8:00 a.m.–9:00 a.m.

General Session

**Straight from the Top!
A Conversation on
Occupational Health & Safety**

Honourable Lisa Raitt
Minister of Labour, Human
Resources and Skills Development
Canada, Gatineau, Quebec



David Michaels, MPH, PhD
Assistant Secretary of Labor for
Occupational Safety and Health,
U.S. Department of Labor,
Washington, DC
Palais 517

8:00 a.m.–4:00 p.m.

CareerAdvantage Development Fair 2013, Palais 517d

8:00 a.m.–7:00 p.m.

ST-02 A Day in Quebec, Bus departs Palais, Viger Street, at 7:45 a.m.

9:00 a.m.–Noon

ST-03 Old Montreal—A Walking Tour, Walkers depart Palais, Viger Street, at 8:45 a.m.

9:00 a.m.–3:00 p.m.

Expo

Passport to Prizes, Expo Theater, Special Displays,
Cyber Center, Restaurants, Lounges. Join us for
Cafe and Croissants at 9:00 a.m. No sessions
scheduled 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.

Posters

Expo

Poster Sessions 403

Authors present 10:00 a.m.–Noon

Poster Sessions 404

Authors present 1:00 p.m.–3:00 p.m.

9:00 a.m.–4:00 p.m.

Volunteer Red Carpet Club, Palais 512g

9:30 a.m.–12:30 p.m.

TT-01 McGill University Hazardous Waste
Management Transfer Centre, Bus departs
Palais, Viger Street, at 9:15 a.m.

9:30 a.m.–2:00 p.m.

Exhibitor Product Demos and Presentations,
Expo Theater

10:00 a.m.–11:00 a.m.

- CR 307 How to Identify and Train HazMat Employees, Palais, 520a

10:00 a.m.–Noon

- PO 116 Nonionizing Radiation, Palais, 511b

10:00 a.m.–12:30 p.m.

- PO 114 Biosafety and Environmental Microbiology II, Palais, 515

- PO 115 Engineering, Palais, 514

10:30 a.m.–11:30 a.m.

Ask the Experts with the Honourable Lisa Raitt and
Dr. David Michaels, Palais, 518

13th Annual Upton Sinclair Memorial Lecture for
Outstanding EHS Investigative Reporting,
Palais, 519

10:30 a.m.–12:30 p.m.

- PO 117 Ergonomics and Exposure Effects, Palais, 520b
- PO 118 Health Care II: Aerosol Transmissible Disease Control Measures, Palais, 513a
- PO 119 Noise Exposure and Hearing Conservation, Palais, 513d
- RT 214 Confined Spaces — Process of Elimination through Design and Redesign!, Palais, 520c
- RT 216 OHLearning.com: Practical-Based Advice from Training Providers, Palais, 510b
- RT 217 U.S. Federal Environmental Lead Roundtable, Palais, 510a
- RT 218 Crystalline Silica: Issues and Controls, Palais, 516a
- RT 219 IT for the IH, Palais, 511a
- SS 002 Understanding and Advancing the Science Behind Health-Based OELs, Palais, 710b

10:30 a.m.–1:00 p.m.

- RT 215 Managing and Regulating Combustible Dust, Palais, 511c

11:00 a.m.–Noon

- NIOSH Guidelines for Aerosol Sampling, Palais, 516d

11:30 a.m.–12:30 p.m.

- CR 308 Using Tracers for Building Airflow and Air Infiltration Surveys, Palais, 520a

12:30 p.m.–1:30 p.m.

NIOSH Tech Talks: Current Topics, Palais, Expo
William P. Yant Award Lecture, Palais, 518

12:30 p.m.–2:00 p.m.

EV-05 IH Mysteries Workshop, Palais, 512a

EV-06 Luncheon Discussion: Sustainability and
Social Responsibility Careers — Why IH
Professionals are Best Suited to Lead,
Palais, 512e

1:00 p.m.–5:00 p.m.

- PO 120 No Crystal Ball Required: Predictive Exposure Assessment, Palais, 511b

1:30 p.m.–4:30 p.m.

TT-02 Bell Helicopter Textron Canada Limite
Manufacturing Facility, Bus departs Palais,
Viger Street, at 1:15 p.m.

TT-03 TOHU, Bus departs Palais, Viger Street,
at 1:15 p.m.

1:30 p.m.–5:00 p.m.

- PO 121 Oil and Gas, Palais, 510a
- RT 220 Campus Hazards and Tragedies — Unique Challenges and Solutions, Palais, 520b
- RT 221 REACH — Impacts on the Practice of Industrial Hygiene, Palais, 510b

2:00 p.m.–3:00 p.m.

- CR 309 Advancing EH&S Program Traction Through Sustainability Alignment, Palais, 516d

2:00 p.m.–4:30 p.m.

- PO 122 Risk Assessment/Risk Management Research, Palais, 513a
- PO 123 Environmental Issues, Palais, 513d

2:00 p.m.–5:00 p.m.

- PO 124 Aerosols II, Palais, 514
- PO 125 Green Building/LEED, Palais, 515
- RT 222 Heavy Metal Exposure in Economically Under Developed Communities, Palais, 519
- RT 223 PCBs in Construction, Palais, 511a
- RT 224 Problems and Solutions in Datalogging and Alarm Setting Logic for Real-Time Instruments, Palais, 520a
- RT 225 Control of NORM Hazards: Herman Cember Memorial Roundtable, Palais, 511c
- RT 226 Ethics: Global and Emerging Issues, Palais, 516a

2:30 p.m.–4:00 p.m.

- IGNITE!, Palais, 710a



3:30 p.m.–4:30 p.m.

- CR 310 Ambient Environmental Air Monitoring During Outdoor Remediation Activities, Palais, 516d

AIHA®

6:30 a.m.–7:30 a.m.

Violet Council, Westin, Palais, 8th Floor

10:00 a.m.–Noon

Communication and Training Methods Committee,
Palais, 523a

Engineering Industry Special Interest Group,
Palais, 523b

Minority Special Interest Group, Palais, 525

Occupational and Environmental Epidemiology
Committee, Palais, 521a

Occupational and Environmental Medicine
Committee, Palais, 521b

Respiratory Protection Committee, Palais, 524b

Stewardship and Sustainability Committee,
Palais, 524c

10:30 a.m.–11:30 a.m.

Publications Committee, Palais, 512e

11:00 a.m.–1:00 p.m.

Student Local Sections Council Business Meeting,
Palais, 512b

11:30 a.m.–12:30 p.m.

Asia Pacific Planning Meeting, Palais, 512f

Noon–1:00 p.m.

Red Council, Westin, Palais, 8th Floor

12:30 p.m.–1:30 p.m.

Yellow Council, Westin, Viger, 8th Floor

1:30 p.m.–3:30 p.m.

Local Sections Council Business Meeting,
Palais, 710b

2:00 p.m.–4:00 p.m.

Academic Special Interest Group, Palais, 524a

Biological Monitoring Committee, Palais, 521a

Clandestine Laboratory Working Group,
Palais, 523a

Control Banding Working Group, Palais, 523b

Environmental Issues Special Interest Group,
Palais, 521b

Safety Committee, Palais, 524b

Students and Early Career Professionals Committee,
Palais, 524c

Toxicology Committee, Palais, 525

5:00 p.m.–6:30 p.m.

AIHce 2013 Press Reception, Sheraton, Salon 3,
Level 2

5:30 p.m.–7:00 p.m.

Volunteer Recognition Ceremony and Reception
(by invitation), Fairmont, Joliet

6:30 p.m.–7:30 p.m.

MSA/AIHA Reception, Sheraton, Salle de bal,
Level 4

AIHA Registry Programs®

10:00 a.m.–Noon

SME Team Meeting: Exposure Decision Analysis,
Palais, 512d

SME Team Meeting: IAQMP (New Construction),
Palais, 512h

AIHF

3:30 p.m.–5:30 p.m.

Board of Trustees Meeting, Sheraton, Salon 6,
Level 3

JOEH

2:00 p.m.–4:00 p.m.

JOEH LLC Board Meeting, Sheraton, Salon 5,
Level 2

Note Meeting Rooms ...

Palais des congrès de Montreal = Palais

Le Centre Sheraton Montreal = Sheraton

Le Westin Montreal = Westin

Ancillary

9:00 a.m.–10:30 a.m.

Work Place Health without Borders, Palais, 524a

3:00 p.m.–8:00 p.m.

Medgate – OH&S Software (by invitation),
Sheraton, Lamartine, Level A

4:00 p.m.–6:00 p.m.

University of Cincinnati – Academy of Kettering
Fellows, Sheraton, Salon 2, Level 2

4:30 p.m.–6:00 p.m.

University of Central Missouri Alumni and Friends,
Sheraton, Jarry, Level A

University of Texas and University of Houston – Clear
Lake Alumni Reception, Sheraton, Musset,
Level A

4:30 p.m.–6:30 p.m.

University of Michigan Reception, Sheraton,
Drummond East, Level 3

5:00 p.m.–7:00 p.m.

Montana Tech AIHce 2013 Alumni Gathering,
Bistro Bar Chez Antoine (first floor lobby of
Delta Centre-ville Montreal Hotel),
777 University Street

University of Washington Alumni and Friends
Reception, Sheraton, Hemon, Level A

6:00 p.m.–8:30 p.m.

SKC International Distributor Reception
(by invitation), Sheraton, Kafka, Level A

6:45 p.m.–8:00 p.m.

Purdue University Alumni Reception, Sheraton,
Joyce, Level A

Discover Montreal – Sign Up for a Social Tour



Montreal was named one of the **world's top cities to visit** and **one of the world's happiest cities** by *Lonely Planet*.



General Session

8:00 A.M.–9:00 A.M. | PALAIS, 517

A Conversation on Occupational Health and Safety — Straight from the Top!

Honourable Lisa Raitt, Minister of Labour, Human Resources and Skills Development Canada, Gatineau, Quebec, Canada

David Michaels, MPH, PhD, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, Washington, DC

Join Minister Raitt and Assistant Secretary David Michaels for a moderated “Meet the Press” style discussion. The conversation focuses on a broad range of current topics and issues affecting occupational and environmental health and safety professionals today.

An Ask the Expert Session follows,
10:30 a.m.–11:30 a.m., in room 518.

Moderator: John Henshaw, CIH
Vice President, Academy of Industrial Hygiene
Sanibel, FL



Exhibitor Product Demos and Presentations

9:30 a.m.–Noon | Expo Theater

9:30 a.m.

Dräger's X-dock Modular Test System, Dräger

Dräger presents its next generation modular function, test/bump test, calibration, documentation and reporting system that promotes smarter, safer work. X-dock saves time with fast, accurate tests, saves money with tests that use less gas, and increases operational safety with analysis, documented results and the ability to synchronize to a central server.

10:00 a.m.

Galson Laboratories' Hydrofracking Kit, Galson Laboratories

A demonstration of the hydrofrackit will allow you to see how you can test for: respirable dust and silica quartz, volatile organic compounds – BTEX, hydrogen sulfide, noise, and more.

10:30 a.m.

Rapid Assessment of Bulk Materials for Microbial Contamination, Mycometer, Inc.

The only USEPA-verified rapid technology for fungi can now be applied to bulk materials, such as insulation, drywall, plaster, or even water. Come to this presentation to see a live test demonstration of different materials and a discussion of the sampling method and data interpretation. This robust, reliable method provides the ability to rapidly assess damage to specific materials and identify sources of contamination that visual assessment alone cannot. See if you can predict which materials are contaminated!

11:00 a.m.

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

The Model DX4040 portable FTIR gas analyzer can identify “unknown” gases within minutes of arriving at site by searching the NIST/EPA® reference library of over 5,000 gases. Measuring 25 gases simultaneously at sub-ppm levels, the DX4040 is also a very cost-effective solution for performing workplace exposure assessments at hospitals, chemical plants, remediation sites, and universities.

11:30 a.m.

Medgate GX2 – Advanced Industrial Hygiene Software, Medgate, Inc.

Developed by Medgate's own certified industrial hygienists (CIHs) with input from respected IH leaders at our client companies, the Medgate's advanced Industrial Hygiene software suite enables industrial hygienists to effectively identify hazards and mitigate risks to promote a healthy work environment. By using Medgate GX2, hygienists will not only productively and proactively manage IH data but will be empowered to clearly demonstrate the value of industrial hygiene within their organizations.

CR 307

How to Identify and Train HazMat Employees

10:00 a.m.-11:00 a.m. | Palais, 520a

Presenter: D. Stoehr, Daniels Training Services, Freeport, IL.

A hazardous material is anything the USDOT determines to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, including paints, resins, cleaners, plating solutions, solvents, fuels, welding gases, and more. Most manufacturers receive hazardous materials as product and ship hazardous waste (a hazardous material). Any employee involved with the receiving or shipping of hazardous materials is a HazMat Employee subject to the training requirements of the USDOT at 49 CFR 172, Subpart H.

PO 116

Nonionizing Radiation

10:00 a.m.-Noon | Palais, 511b

Arranger: W. Ringo, DMR and Associates, Louisville, KY. **Moderator:** A. Butler, Butler Health and Safety, Inc., San Pedro, CA. **Monitors:** M. Phillips, University of Oklahoma, Oklahoma City, OK; G. Gruetzmacher, University of Wisconsin-Madison, Madison, WI.

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

SR-116-01 A Review of Public Exposures to Radio-frequency — Emitting Sources. M. Shum, H. Ward, National Collaborating Centre for Environmental Health, Vancouver, BC, Canada.

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

WITHDRAWN: CS-116-02 Managing RF Safety Without Getting Overloaded — How to Work with Your Customer to Manage a Multi-Site Non-ionizing Radiation Safety Program. P. Periakuruppan, S. Shindel, Intel Corp., Hillsboro, OR.

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

CS-116-03 Laser Pointers: Are They as Safe as Everyone Believes? K. Merritt, Safety and Quality Assurance Alliance, Hampton, VA.

11:30 a.m.-Noon

CS-116-04 Verification Measurements of Nonionizing Radiation in Office Buildings. E. Jensen, Statoil ASA, Stavanger, Norway; A. Nordhammer, H. Smedbold, Proactima, Stavanger, Norway; H. Borgaas, Statoil ASA, Oslo, Norway.

PO 114

Biosafety and Environmental Microbiology II

10:00 a.m.-12:30 p.m. | Palais, 515

Arranger/Moderator: C. Peart, IES Engineers, Blue Bell, PA. **Monitors:** D. Hurley, CertainTeed Corp., North Wilkesboro, NC; M. Bergner, St. Paul, MN.

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

SR-114-01 Tasked Based Assessment of Dairy Worker Exposure to Bioaerosols. M. Davidson, S. Reynolds, M. Clark, T. Keefe, J. Mehaffy,

M. Bradford, N. Roman-Muniz, G. Dooley, Colorado State University, Fort Collins, CO; J. Poole, University of Nebraska Medical Center, Omaha, NE; F. Mitloehner, M. Schenker, University of California-Davis, Davis, CA.

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

SR-114-02 Exposures Associated with Indoor Marijuana Grow Operations. K. Serrano, M. Van Dyke, J. Schaeffer, J. Martyny, National Jewish Health, Denver, CO.

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

CS-114-03 Dealing with Marijuana Grow Houses — The Misguided Canadian Public Health Approach to Assessment and Remediation of Mold. P. Pityn, OSHTech Incorporated, London, ON, Canada; E. Sullivan, EA Sullivan & Associates, London, ON, Canada.

11:30 a.m.-Noon

SR-114-04 The Study of Biological Characteristics in Wood Processing Workplaces. C. Lai, K. Huang, S. Wun, Y. Liu, Y. Lin, Chung Shan Medical University, Taichung, Taiwan; F. Tang, Changhua Christian Hospital, Changhua County, Taiwan; P. Hung, Institute of Occupational Safety and Health, Taipei, Taiwan.

Noon-12:30 p.m.

SR-114-05 Characteristics of MWF-Related Bioaerosols in the Workplace Using Metalworking Fluids. T. Lin, H. Chang, J. Liu, Y. Lin, L. Yang, China Medical University, Taichung, Taiwan; P. Hung, Institute of Occupational Safety and Health, CLA, Taipei, Taiwan.

PO 115

Engineering

10:00 a.m.-12:30 p.m. | Palais, 514

Arranger/Moderator: E. Jones, ExxonMobil, Inc., Torrance, CA. **Monitors:** V. Kero, Omega Environmental, Hackensack, NJ; I. Habeeb, University of Iowa, IA.

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

SR-115-01 CFD Modeling and Tracer Gas Studies to Improve Occupational Stressor Control in Aircraft Paint Hangars. K. Paulson, NAVFAC EXWC, Port Hueneme, CA; J. Bennett, NIOSH, Cincinnati, OH.

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

CS-115-02 Industrial Hygiene Engineering Controls for Petrochemical Plants. R. Powell, ExxonMobil, Inc., Baytown, TX.

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

CS-115-03 Do Local Exhaust Ventilation Systems Measure Up to the Task of Tuckpointing? M. Cooper, The Lippy Group, Berkeley, CA; P. Susi, The Center for Construction Research and Training, Silver Spring, MD.

11:30 a.m.-Noon

CS-115-04 Odor Investigations: Stop the Sampling. S. Caulfield, W. Turner, Turner Building Science & Design, LLC, Harrison, ME.

Noon-12:30 p.m.

SR-115-05 Insulative Coatings for Personnel Burn Protection. J. Koravos, Cabot Corporation, Billerica, MA.

Special Session

Ask the Experts with the Honourable Lisa Raitt and Dr. David Michaels

10:30 a.m.-11:30 a.m. | Palais, 518

Moderator: John Henshaw, CIH, Vice President, Academy of Industrial Hygiene, Sanibel, FL

Following today's General Session on "A Conversation on Occupational Health and Safety — Straight from the Top", join Lisa Raitt and David Michaels at this special session.

13th Annual Upton Sinclair Memorial Lecture for Outstanding EHS Investigative Reporting

Breaking the Silence: The Importance of Public Records for Worker Safety at Sensient Flavors

10:30 a.m.-11:30 a.m. | Palais, 519



Presenter: Tony Cook, Indianapolis Star, Indianapolis, IN

At Sensient Flavors, a food and beverage flavoring plant in Indianapolis, federal health officials found a third of the plant's roughly 100 production workers had experienced abnormally

restrictive lung function. Despite this finding, Sensient fought tooth-and-nail to prevent further federal and state inspections. In August, the *Indianapolis Star* published an investigation of the plant, relying heavily on records from NIOSH, Indiana OSHA, and federal and state courts. The story prompted the exit of the plant's safety manager and workplace safety investigations by two of Sensient's customers, Starbucks and Campbell Soup. Since then, the plant has promised \$4 million in safety upgrades. Stories like this are often overlooked or underreported, but they can be game changers for worker safety. Reporter Tony Cook will discuss the road blocks he faced in his reporting, and the essential role public records played.



AIHce cannot guarantee that all presenters listed in this program will appear. We regret any disappointment if a particular speaker is unable to present.

PO 117

Ergonomics and Exposure Effects

10:30 a.m.-12:30 p.m. | Palais, 520b

Arranger/Moderator: L. Nystrom, DuPont, Wilmington, DE. **Monitors:** R. Brauch, Casella CEL, Inc., Amherst, NH; R. Thomas, Auburn University, Auburn, AL.

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

CS-117-01 The Growing Problem in Ergonomics: Obesity. B. McGowan, Humantech, Inc., Ann Arbor, MI.

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

SR-117-02 Whole-Body Vibration Exposure of Motorcycle Riders and Passengers. H. Chen, National Taipei University of Technology, Taipei, Taiwan; Y. Pan, Institute of Occupational Safety and Health, Executive Yuan, Taipei, Taiwan.

11:30 a.m.-Noon

SR-117-03 Force and Repetition Interact with Respect to Musculoskeletal Disorder Risk. S. Gallagher, Auburn University, Auburn, AL; M. Barbe, Temple University, Philadelphia, PA.

Noon-12:30 p.m.

SR-117-04 Worker Perception of Slipperiness and Future Risk of Slipping. T. Courtney, S. Verma, W. Chang, Y. Huang, D. Lombardi, M. Brennan, Liberty Mutual Research Institute for Safety, Hopkinton, MA; M. Perry, George Washington University, Washington, DC.

PO 118

Health Care II: Aerosol Transmissible Disease Control Measures

10:30 a.m.-12:30 p.m. | Palais, 513a

Arranger: M. Jones, Department of Veterans Affairs, Iowa City, IA. **Moderator:** S. Derman, Medishare Environmental Health & Safety Services, Santa Clara, CA. **Monitors:** G. Byrns, Illinois State University, Normal, IL; M. Jones, Department of Veterans Affairs, Iowa City, IA.

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

CS-118-01 Performance of Airborne Transmission-Based Engineering Controls in Health Care Facilities. S. Rucker, Ecostratum, Cincinnati, OH.

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

SR-118-02 Respirator Policies and Practices for Aerosol-Transmissible Diseases in Acute Care Hospitals. L. Brosseau, K. Cline, University of Minnesota, Minneapolis, MN; L. Conroy, M. Sietsema, University of Illinois, Chicago, IL.

11:30 a.m.-Noon

CS-118-03 Control Strategies for Patient Protection when Performing Microbial Remediation in Critical Care Areas in a Hospital. R. Rotterman, ENVIRON International Corp., Chicago, IL; S. Streed, Lee Memorial Health System, Fort Myers, FL; D. Krause, ENVIRON International Corp., Tampa, FL.

Noon-12:30 p.m.

CS-118-04 Designing a Defensible HACCP Program for *Legionella* in Building Water Systems, Complying With ASHRAE Standard 188. J. Krause, J. Poole, ENVIRON International, Tampa, FL.

PO 119

Noise Exposure and Hearing Conservation

10:30 a.m.-12:30 p.m. | Palais, 513d

Arranger/Monitor: M. Hayden, San Antonio, TX. **Moderator:** C. Achutan, University of Nebraska, Omaha, NE. **Monitor:** W. Bishop.

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

CS-119-01 Improving Hearing Conservation Performance in a Petrochemical Manufacturing Facility. A. Rovira, J. Tudor, Shell Oil Company, Norco, LA; M. Karr, Shell Oil Company, Deer Park, TX.

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

SR-119-02 Noise Exposure Assessment on an Onshore Gas Platform: Identification of Noise Sources and Contribution to Workers' Doses. A. Dufresne, A. Segueni, A. Vyskocil, M. Debia, Université de Montréal, Montréal, QC, Canada.

11:30 a.m.-Noon

CS-119-03 Noise Control Methods for Shipbuilding. D. Chute, Atrium EH&S Services, LLC, Reston, VA.

Noon-12:30 p.m.

SR-119-04 Improving the Likelihood of Detecting a Significant Hearing Threshold Shift During Annual Audiometric Hearing Assessments. M. Axon, SafeBridge Europe, Limited, Liverpool, United Kingdom.

RT 216

OHLearning.com: Practical-Based Advice from Training Providers

10:30 a.m.-12:30 p.m. | Palais, 510b

Arranger/Moderator: L. Renton, WESA Inc., Ottawa, ON, Canada. **Monitors:** K. O'Connell, WESA Inc., Ottawa, ON, Canada; K. Thompson, WESA Inc., Kingston, ON, Canada.

In many developed countries, the number of occupational hygienists is static or decreasing. At the same time, countries in the developing world are experiencing rapidly increasing incidence of occupational illnesses as they industrialize, preventable by good occupational hygiene. As a result, the global demand for hygienists is increasing rapidly. Some 6 years ago, a group of practicing occupational hygienists started a new initiative on education, training, and qualifications, now available at OHLearning.com. This group of occupational hygienists shared a common vision — to raise awareness of occupational ill health and to build the competencies required to recognize and control these risks. OHTA created a scheme where people can receive high-quality training in occupational hygiene

anywhere in the world. Moreover, their qualifications will be internationally recognized (ICertOH) so that they can practice their discipline in any participating country. This session brings together four OHTA-approved training providers with their stories of course delivery in English and non-English speaking countries with the successes and challenges that ensue.

- **OHLearning Courses Delivery — Experiences of an Englishman Abroad!** J. Dobbie, BP Group Safety & Operational Risk, Middlesex, U.K.
- **OHLearning Courses Delivery — Experiences of Another Englishman Abroad, Flying Solo!** D. O'Malley, Genesis Environmental Ltd., Hoylake, Wirral, United Kingdom.
- **Asia Pacific Experience to Date.** J. Singh, Golder Associates, Inc., Kamuela, HI.
- **Perspectives on Delivering OHLearning Courses in El Salvador and France.** M. Crepeau, WESA Inc., Ottawa, ON, Canada.

RT 217

U.S. Federal Environmental Lead Roundtable

10:30 a.m.-12:30 p.m. | Palais, 510a

Arranger: W. Friedman, Office of Healthy Homes and Lead Hazard Control, Washington, D.C. **Moderator:** K. White, Consultive Services, Virginia Beach, VA. **Monitors:** E. Pinzer, Office of Healthy Homes and Lead Hazard Control, Washington, DC.; D. Levitt, U.S.DOL, Washington, DC.

Key federal agencies working to eliminate childhood and adult lead poisoning as a major public health problem will describe their upcoming activities to protect the public. CDC, EPA, HUD, and the Army will discuss, as a panel and by engaging audience participants, how their programs are being and will be influenced by CDC's 2012 policy change on defining elevated blood lead levels in children. In addition, CDC will also discuss sustainability issues, including the recycling and reprocessing of lead materials from buildings and other sources. EPA will provide updates on the implementation and enforcement strategy for its Repair, Renovation and Painting Rule and other rules; its lead laboratory accreditation program; its lead outreach program; and its lead certification programs. HUD will describe how its 2012 Lead Guidelines are affecting its housing assistance programs and the industries and professionals dealing with them. The Army will discuss new approaches and guidance for addressing lead in facilities it manages. 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 Update.** M. Brown, U.S. CDC Healthy Homes and Lead Poisoning Prevention, Atlanta, GA.
- **EPA Lead Update.** J. Mosby, U.S. EPA, Washington, DC.

- **HUD Lead Update.** W. Friedman, U.S. Dept. of Housing and Urban Development, Washington, DC.
- **Army Lead Update.** G. Braybrooke, U.S. Army Institute of Public Health, Aberdeen Proving Ground, MD.

RT 218

Crystalline Silica: Issues and Controls

10:30 a.m.-12:30 p.m. | Palais, 516a

Arranger: S. Fess, Xerox Corporation, Webster, NY. **Moderator:** J. Cohen, The Cohen Group, San Mateo, CA. **Monitors:** B. Finder, University of Wisconsin, Stout, WI; C. Parks, ERSI, East Syracuse, NY.

Crystalline silica is found in many construction materials: brick and mortar, ceramic tile, sandpaper, paint, and concrete. Processes and equipment such as drills, jackhammers, abrasive blasting, and diamond wheel cutting operations on these materials create a dust cloud many of us have seen during construction and demolition work. Occupational health professionals have found exposures to these workers can be very high, and the OSHA emphasis on silica has failed to adequately control exposures. In this session, the following topics will be discussed: research involving silica samples collected in construction settings that were analyzed to address silica exposure control program components (including recommendations from actual company programs); how to establish a robust silica exposure control program (and understanding the confounding factors and their respective solutions); evaluating operations and tasks, air sampling, and risk assessment, sometimes utilizing methods and/or equipment not recognized by OSHA may provide the most representative assessment of exposures, and a review of proposed rules — how contractors can prepare for additional compliance requirements.

- **How Ready Are You for a New OSHA Silica Standard?** L. Capicik, Brasfield & Gorrie, LLC, Kennesaw, GA.
- **Impediments to Crystalline Silica Exposure Assessments.** M. Pannell, U.S. Army, Ft. Belvoir, VA.
- **An Equipment Manufacturer's Solution to Effective Engineering Controls.** W. Benedict, Hilti North America, Tulsa, OK.
- **Silica Exposures at the Job Site: The Customer's Perspective in Dealing with Contractors.** S. Fess, Xerox Corporation, Webster, NY.

RT 219

IT for the IH

10:30 a.m.-12:30 p.m. | Palais, 511a

Arranger/Moderator: B. Lewis, Concurrent Technologies Corporation, Johnstown, PA. **Monitors:** R. Brown, Concurrent Technologies Corporation, Aberdeen Proving Ground, MD; J. Klavan, AAI Corporation, Hunt Valley, MD.

This Roundtable will present an in-depth look at information technologies as a tool for the handling of IH-related

data, its effective use, distribution, management, and interpretation. Whether you're developing an entire program from scratch; dealing with the issues of integrating an off-the-shelf data solution into your business practices; needing to fine-tune data collection with the use of hand-held devices and related apps; or perhaps tracking the professional career growth of S&H professionals within your organization, our session speakers will discuss the challenges involved and firsthand accounts of how each were overcome.

- **There's an App for That III.** M. Rollins, Thermo Electron, Waltham, MA.
- **Developing an HSE System in an International Environment.** C. Sall, Emirate's Nuclear Energy Corporation, New Braunfels, TX.
- **IH Data Systems? Where Can We Go from Here?** S. Battista, 3M, Maplewood, MN.
- **Army Training is "IT."** S. Chiusano, U.S. Department of Defense, Arlington, VA.

SS 002

Understanding and Advancing the Science Behind Health-Based OELs

10:30 a.m.-12:30 p.m. | Palais, 710b

Arranger: T. Lentz, NIOSH, Cincinnati, OH. **Moderator:** S. Ripple, The Dow Chemical Company, Midland, MI. **Monitors:** B. Heckman, LaCroix Davis LLC, Carlisle, PA; D. Heidel, Bureau Veritas North America, Inc., Edison, NJ.

Occupational exposure limits (OELs) play a critical role in occupational risk assessment and risk management decisions. There are dozens of organizations and agencies that derive OELs worldwide. Most of these groups provide documentation of their administrative procedures as well as the rationale for the derivation of OELs for individual substances. However, few (if any) provide robust documentation of the underlying scientific methodology employed in OEL development. The result of this absence of a written description of OEL development methodology is a lack of international harmonization in existing values among organizations; lack of transparency (or at least communication) related to important scientific principles for OEL development; and, in some cases, lack of consistency in OEL development within an organization. The goal of this roundtable is to highlight the science principles and their impacts on development and application of health-based OELs. The roundtable is intended to enable industrial hygiene professionals to have a clear understanding of the science methods incorporated in the OELs they develop or use.

- **A Strategy and Rationale for Modern OEL Development.** T. Lentz, NIOSH, Cincinnati, OH.
- **Setting OELs for Challenging Endpoints: Irritation and Sensitization.** A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH.
- **WITHDRAWN: Characterizing Human Variability: Epigenetic and Non-Epigenetic Considerations.** P. Schulte, NIOSH, Cincinnati, OH.

- **Interpreting OELs — Roles of Risk Probability and Uncertainty Analysis.** L. McKernan, NIOSH, Cincinnati, OH.
- **Moving Beyond Inhalation-Based OELs: Cumulative Risk Assessment.** P. Williams, E Risk Sciences, LLP, Boulder, CO.

RT 214

Confined Spaces — Process of Elimination Through Design and Redesign!

10:30 a.m.-12:30 p.m. | Palais, 520c

Arranger: N. Pearce, NFPA, Quincy, MA. **Moderator:** C. Muncy, Concurrent Technologies Corporation, Fairborn, OH. **Monitors:** D. Davis, Marine Consultant, Virginia Beach, VA; W. Brown, DMAX, Ltd., Fairborn, OH.

Prevention through Design (PtD) is a cost-effective means to eliminate or reduce hazards in the design phase. The principles of prevention through design and redesign can be effectively applied to confined spaces. With thoughtful design, the confined space and/or the need for entry can be completely eliminated. In existing spaces, redesign can significantly improve worker safety and may allow the use of alternate procedures or reclassification instead of full permit. This roundtable will provide background information of how PtD and redesign can be used to eliminate or to minimize the hazards of confined spaces. Examples of how PtD and redesign has been effectively used to eliminate or decrease hazards in confined spaces in various industries will be presented. The audience will be encouraged to provide additional examples and to brainstorm about other ways that PtD and redesign could be used to eliminate confined spaces.

- **No More Confined Spaces!** N. Pearce, NFPA, Quincy, MA.
- **Using a PtD Philosophy to Reduce Risks of Confined Space Entry and Rescue — Manufacturing Case Studies.** M. Palmer, EnSafe, Inc., Knoxville, TN.
- **Design Standards for PtD Used at San Francisco Public Utilities Commission.** G. Bibbins, San Francisco Public Utilities Commission, San Francisco, CA.
- **Re-Design to Re-Define Existing Confined Spaces.** D. Mills, Tennessee Valley Authority, Chattanooga, TN.

RT 215

Managing and Regulating Combustible Dust

10:30 a.m.-1:00 p.m. | Palais, 511c

Arranger: G. Clark, WorkSafeBC, Vancouver, BC, Canada. **Moderator:** A. Johnson, WorkSafeBC, Vancouver, BC, Canada. **Monitors:** H. Wong, Pacific Environmental Consulting, North Vancouver, BC, Canada; A. Sass-Kortsak, University of Toronto, Toronto, ON, Canada.

Dust explosions can cause major loss of life and property in industry. These explosions are completely preventable, provided that dust is controlled properly and not allowed to accumulate. Recently, two sawmills in British Columbia were completely destroyed in dust explosions — several workers were killed and many others injured. This roundtable will review these (and other) combustible dust incidents and discuss what regulators and other agencies are doing to prevent them in the future.

- **Two Sawmill Explosions in British Columbia – What Happened?** G. Clark, WorkSafeBC, Vancouver, BC, Canada.
- **WorkSafeBC Response to Two Sawmill Explosions in British Columbia.** B. Nakahara, WorkSafeBC, Prince George, BC, Canada.
- **Controlling Combustible Dust Hazards in Wood Products Manufacturing Operations.** G. Ellis, Weyerhaeuser Company, Broken Bow, OK.
- **Managing Combustible Dust in Manufacturing – My Experience in Ontario.** P. Bozek, University of Toronto, Toronto, ON, Canada.
- **Dust Explosion Reduction Through Mechanical Extraction.** J. Bachynski, EPM Consulting Ltd., Halifax, NS, Canada.

Special Session

NIOSH Guidelines for Aerosol Sampling

11:00 a.m.–Noon | Palais, 516d

Presenters: M. Harper, NIOSH, Morgantown, WV; K. Ashley, NIOSH, Cincinnati, OH

Procedures for assessing aerosols are updated over time following improvements in science and technology. Sugar tubes and impingers used in the period when particles were counted and compared to limit values couched as “millions of particles per cubic foot” have been largely superseded by filters for determination of mass per unit volume. Several organizations have also advocated for filter holders (samplers) with defined size-selective characteristics to match the particle size collection efficiency of the human nose and mouth. Recent research by NIOSH, OSHA, and the INRS in France has led to clarifications of procedures used by these different agencies to properly assess workers’ aerosol exposures. The intent of this presentation is to disseminate this recent research to a wider audience, most especially to those who collect and submit samples to the laboratory, as well as to those who perform the analyses. Two matters of major concern will be discussed: (a) the importance of internal sampler wall deposits and the methods by which these can be included; and (b) the relationship between the performance of currently used samplers and those developed specifically for size-selective collection. Evaluations that have been performed to support more accurate compliance with the intent of the procedures will be presented. At the close of the presentation, participants will be able to assess these developments and understand the

rationale for current recommendations in the NIOSH Manual of Analytical Methods and elsewhere (e.g., voluntary consensus standards), and the impact this will have on the results of exposure assessments.

CR 308

Using Tracers for Building Airflow and Air Infiltration Surveys

11:30 a.m.–12:30 p.m. | Palais, 520a

Presenter: C. Cooper, VERTEX Companies, New York, NY.

Tracers are markers placed in air to evaluate the movement and distribution of air. Tracers have a variety of uses in building air movement surveys, including measuring exhaust ventilation, LEED verification of smoking room isolation, building interzonal air movement and infiltration, outside air distribution, or to track undesirable chemical/odor migration in buildings. The chemical tracer sulfur hexafluoride (SF₆) will see declining use due to its global warming impact 22,800 times CO₂ and an atmospheric lifetime of 800 years.

NIOSH Tech Talks: Current Topics

12:30 p.m.–1:30 p.m. | Palais, Expo

Facilitated by NIOSH researchers, discussions focus on high-interest topics in research and technical content.

1. Engineering Controls

Moderator: R. M. Hall, NIOSH, Cincinnati, OH
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 and any emerging issues related to industrial hygiene and engineering controls.

2. Nanotechnology

Moderators: C. Geraci, K. Martinez and L. Hodson, NIOSH, Cincinnati, OH
NIOSH is the leading federal agency conducting research and providing guidance on the occupational safety and health implications of nanotechnology. NIOSH has conducted numerous field investigations to evaluate exposures and control technologies to gain an understanding of good risk management practices that are applicable to working with engineered nanomaterials. Discussion focuses on what NIOSH has learned from these field evaluations and how the results are contributing to the development

of good risk management practices and nanomaterial occupational exposure limits.

3. Application of REACH Tools

Moderator: E. Lee, NIOSH, Morgantown, WV
The REACH is a regulatory regime for chemicals of the European Union (EU) where chemicals must be registered in three phases to the European Chemicals Agency depending on the amount manufactured or imported per year. Registration will require submission of a chemical safety report if the application of the chemical is classified as having health or environmental effects. U.S. companies that produce and export chemicals to the EU must conform to the new regulation. The REACH guidelines introduce tiered approaches for estimating the exposure in the iterative process of developing the exposure situations. This discussion focuses on introducing tier models including strength and weakness, selection for specific exposure situations and future plans.

William P. Yant Award Lecture Global Estimates of the Burden of Injury and Illness at Work in 2012

12:30 p.m.–1:30 p.m. | Palais, 518



Presenter: Jukka Takala, PhD, (DSc), BSc, MSc, Executive Director, Workplace Safety and Health Institute, Ministry of Manpower Services Centre, Singapore.

Background

The International Labour Organisation, ILO, and World Health Organisation,

WHO, have made estimates of occupational injuries and illnesses, and burden of health. Both of them have come to a result that of all fatalities in industrial countries around 5–7 % are work-related. This percentage is slightly smaller in developing countries where non-occupational health problems have a bigger share. New information has become available, and when work processes, environment and working populations change quantitatively and qualitatively, updates of the estimates become important. Better evidence is needed for policy and practices in countries, companies and organisations. This paper provides latest updated information for such purposes.

Materials and Methods

Member states of ILO and WHO report their own statistics and are collected, recorded and compiled by these UN bodies. Reports from most developed countries are usually more comprehensive but many countries do not report properly their data on occupational injuries and illnesses. Such missing injury data may be replaced by a proxy, a country or an average of several countries, that have closely resembling economic structures and that have reported such

data well. Reliable occupational disease statistics is equally not available. This lack has been compensated by the population attributable fractions (AF) for work-related illnesses — a broader term than the legally defined “occupational diseases”. The AF’s are commonly used to measure the component of illnesses and deaths that are related to work. Such fractions have been well studied in many developed countries. WHO mortality tables by different regions provide the background data and using the AF component — percentage — it is possible to provide a rough estimate of the fatalities for each disease or group of diseases. ILO and WHO data has been used and these are based on the years 2008-2011.

Results

Globally 2.3 million deaths take place due to occupational injuries (318 000 deaths) and work-related diseases (2 022 000 deaths) annually. The biggest killers are work-related cancer (32%), work-related circulatory diseases (23%), communicable diseases (17%), in particular, in farming in developing countries, and occupational accidents (18%). The last two groups, however, are less common in the established market economy countries. United States had 67,000 fatal work-related diseases and 5,300 fatal occupational accidents after an adjustment for under reporting, competitiveness rank was 7, while Canada had 7,900 fatal work-related illnesses and 480 fatal occupational injuries and ranking as 12th. Competitiveness and safety have a clear relation, the less we have injuries the higher is the competitiveness and productivity. Work-related

illnesses that have a long latency period and are linked to ageing are clearly on the increase, while the number of occupational injuries has gone down, in particular, in industrialised countries thanks to prevention efforts and structural changes in the economy. Many of those injuries re-appear in the Asian and other countries where many production facilities have moved to.

Luncheon Discussions

EV 05 SOLD OUT

IH Mysteries Workshop

12:30 p.m.-2:00 p.m. | Palais, 512a

Facilitator: Fred Boelter, Environ International, Chicago, IL.

EV 06 SOLD OUT

Sustainability and Social Responsibility Careers — Why IH Professionals Are Best Suited to Lead

12:30 p.m.-2:00 p.m. | Palais, 512e

Moderators: J. Hogue, McDonald’s Corporation, Oak Brook, IL; D. Martin, Pacific Biosciences, Menlo Park, CA.

PO 120

No Crystal Ball Required: Predictive Exposure Assessment

1:00 p.m.-5:00 p.m. | Palais, 511b

Arranger: A. Weikert, W.L. Gore and Associates, Inc., Forest Hill, MD. **Moderator:** R. Jones, ENVIRON International, Chicago, IL. **Monitors:** J. Losh, W.L. Gore and Associates, Inc., Elkton, MD; C. Gambino, W.L. Gore and Associates, Inc., Elkton, MD.

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

CS-120-01 IHESIT, a New Tool to Help the Collection and Organization of Exposure-Related Information. S. Arnold, EHS LLC, Roswell, GA; D. Drolet, Institut de recherche Robert-Sauvé en santé et en sécurité du travail, Montréal, QC, Canada; J. Sahmel, ChemRisk, Boulder, CO.

1:30 p.m.-2:00 p.m.

SR-120-02 Evaluation of Exposure Determinant Impacts on Qualitative Exposure Assessments by CIHs. D. Huizen, Grand Valley State University, Grand Rapids, MI; K. Fogerty, Western Michigan University, Kalamazoo, MI; S. Mingela, Wayne State University, Detroit, MI.

Exhibitor Product Demos and Presentations

Noon-2:00 p.m. | Expo Theater

Noon

Portable Aerosol Mobility Spectrometer Makes On-Site Analysis Possible, Kanomax USA Inc.

PAMS is an electrical mobility size spectrometer designed for portable, mobile, or hand-held aerosol sampling applications. It provides the number-weighted diameter distribution of aerosols over the entire submicrometer range (10 to 863nm) in one scan. The unit uses a nonradioactive bipolar aerosol charger to allow easy access to sampling sites with tight safety regulations. Its bipolar charger significantly reduces measurement uncertainty of larger particles in the submicrometer range.

12:30 p.m.

New Generation Real-Time Dust Monitor with Optical Cell Calibration, Casella CEL Inc.

Casella CEL introduces the new CEL-712 Real Time Dust Monitor, a small hand-held portable dust and aerosol monitor that displays real-time concentration in mg/m³ on its high contrast color LCD. With full datalogging, wide range (0 to 25,000 mg/m³) it is used independently or can be paired with a cyclone, filter cassette, and sample pump for size-selective or gravimetric monitoring. The CEL-712 accepts material specific correction factors and is field calibrated with a reference cell.

1:00 p.m.

Introducing a New Multi-Gas Detector with a 2-Month Continuous Run Time and 6-Month Recommended Calibration Frequency, Gas Clip Technologies, Inc.

As long as this new minimum is adequate for the specific application, and depending on fume hood dimensions, this is approximately 52-60% reduction in the minimum volumetric rate of air. Considering that fume hoods should spend most of their life with their sashes closed, this represents an opportunity for a dramatic reduction in energy consumption and, consequently, operating cost.

1:30 p.m.

Gas Detection Fleet and Data Management with the Galaxy® GX2, MSA

This data is used by mechanical system designers, air balancers, Variable Air Volume (VAV), and mechanical contractors. As the sash is closed on a fume hood installed in conjunction with a VAV system, the volumetric rate of air is reduced to maintain a constant face velocity (fpm). However, the standard noted above, gives a floor to this reduction in volumetric rate.

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

SR-120-03 Missing Data Unit Imputation Using Stochastic Methods. J. Persky, F. Boelter, ENVIRON, Chicago, IL.

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

SR-120-04 Assessing the Performance of a Web-Based Tool for the Identification of Chemicals Potentially Posing a Health Risk Through Percutaneous Exposure. J. Lavoué, P. Ambadiang, Université de Montréal, Montréal, QC, Canada; A. Milon, D. Vernez, University of Lausanne and Geneva, Lausanne, Switzerland.

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

SR-120-05 A Model to Predict Inhalation Exposure to Contaminants Resuspended from Soil. J. Thornburg, S. Cho, RTI International, Research Triangle Park, NC; J. Kominsky, Environmental Quality Management, Inc., Cincinnati, OH; W. Barrett, U.S. EPA, Cincinnati, OH.

3:30 p.m.-4:00 p.m.

SR-120-06 Statistical Models for Predicting Occupational Exposure to Airborne Substances. F. Clerc, R. Vincent, INRS, Vandoeuvre les Nancy, France; N. Bertrand, INRS, Paris, France.

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

SR-120-07 Predictive Value of the Near-Field, Far-Field Model with Monte Carlo Analysis. K. Hiteshe, M. Plisko, J. Spencer, Environmental Profiles, Inc., Columbia, MD.

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

SR-120-08 Testing the Upper Percentile of a Lognormal Exposure Distribution in the Presence of Detection Limits. T. Mathew, University of Maryland, Baltimore, MD; K. Krishnamoorthy, Z. Xu, University of Louisiana at Lafayette, Lafayette, LA.

PO 121

Oil and Gas

1:30 p.m.-5:00 p.m. | Palais, 510a

Arranger/Moderator: B. Randolph, Baker Hughes, Houston, TX. **Monitors:** L. Anderson, Golder Associates Inc., Wexford, PA; O. Kampa, ConocoPhillips, Bartlesville, OK.

1:30 p.m.-2:00 p.m.

SR-121-01 Characterization of Surface Spills Associated with Hydraulic Fracturing Operations. H. Avens, S. Gross, A. Banducci, J. Sahmel, B. Tvermoes, ChemRisk, LLC, Boulder, CO; J. Panko, ChemRisk, LLC, Pittsburgh, PA.

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

CS-121-02 Controlling Chemical Hazards in the Oil and Gas Industry: The Future. C. Paul, Enform, Calgary, AB, Canada; M. Pibbs, MSDS Binders, Calgary, AB, Canada.

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

CS-121-03 Evaluating the Release of Respirable Dust and Crystalline Silica from Work Uniforms. G. Mosher, Exponent, Warrenville, IL; D. Malzahn, Exponent, Farmington Hills, MI.

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

CS-121-04 Control of Cr(VI) Fumes Using LEV in Confined Spaces. C. King, U. Chavez, Chevron Products, Pascagoula, MS; S. Goodridge, K. Drach, Chevron Products, Richmond, CA; M. Stewart, S. Poon, Chevron Products, El Segundo, CA; P. Samicanic, Chevron Global Downstream, San Ramon, CA; J. Heisler, R. Nocco, Chevron ETC, San Ramon, CA.

3:30 p.m.-4:00 p.m.

CS-121-05 Industrial Hygiene Assessment of Diesel Emissions (DE). P. Webb, Colden Corporation, Worcester, MA.

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

CS-121-06 Mercury Guideline for the Norwegian Oil and Gas Industry. J. Naerheim, Norwegian Oil Industry Association, Stavanger, Norway.

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

CS-121-07 Why Quiet? The Drivers Behind the Design of Quieter Offshore Facilities in Australia. R. Nocco, Chevron, San Ramon, CA; A. Chandran, W. Powys, B. Chesson, Chevron, Perth, Australia.

RT 220

Campus Hazards and Tragedies — Unique Challenges and Solutions

1:30 p.m.-5:00 p.m. | Palais, 520b

Arranger/Moderator: L. Wong, University of California, Oakland, CA. **Arranger:** J. Klane, Arizona State University, Tempe, AZ. **Monitors:** D. Hurley, CertainTeed Corporation, North Wilkesboro, NC; L. Poore, University of Kentucky, Lexington, KY.

Recent devastating incidents in college/university labs or shops have resulted in higher education EH&S/IH programs coming under public, media, professional organization, and regulatory agency scrutiny. Theater/arts programs aren't typically thought of as a high priority by either (or by some in EH&S/IH), yet they both have unique challenges. In one case, unidentified hazards led to a very serious injury. At most colleges and universities, even though a large percentage of campus EH&S/IH resources are well directed toward academic research laboratory activities, collaborative relationships with researchers are often difficult to achieve. This roundtable will address the factors/challenges represented by many recent incidents/studies in academia laboratory and theater. Recommendations, findings, industry partnerships, and some unique approaches will be presented and discussed as possible change agents. The findings and recommendations by the American Chemical Society's (ACS's) Committee on Chemical Safety Task Force on Creating a Safety Culture in Academic Laboratories will be also be discussed in some detail. This will provide attendees with the tools and information to improve safety culture at their organization.

• **Theater Arts Design and Operations — A Case Study.** B. Cooley, University of California, Santa Cruz, Santa Cruz, CA.

- **Evaluation of Health Hazards in Art Studios at a University.** L. Chen, NIOSH, Cincinnati, OH.
- **A RADICAL Solution to the SOP Dilemma: Developing and Implementing a Comprehensive Computer-Based SOP to Assist Academic Researchers with Risk Assessment.** K. Smith, University of California, Oakland, CA.
- **Risk Assessments in Research Laboratories.** N. Langerman, Advanced Chemical Safety, San Diego, CA.
- **Dow Chemical and University Lab Safety Partnership.** L. Seiler, The Dow Chemical Company, Midland, MI.
- **Laboratory Safety Culture: American Chemical Society Safety Culture Task Force Findings.** E. Talley, Cornell University, New York, NY.
- **Unique Initiatives to Raise the Safety Culture at ASU's Fulton Schools of Engineering (FSE).** J. Klane, Arizona State University, Tempe, AZ.

RT 221

REACH — Impacts on the Practice of Industrial Hygiene

1:30 p.m.-5:00 p.m. | Palais, 510b

Arranger/Moderator: P. Harper, ENVIRON, Phoenix, AZ. **Arranger:** R. Skoglund, 3M Company, St Paul, MN. **Monitors:** P. Logan, 3M Company, St. Paul, MN; D. Deeds, Industrial Health & Safety Consultants, Huntington, CT.

REACH (Registration, Evaluation, Authorization and restriction of Chemical substances), the European Union's regulation on chemicals and their safe use, has significantly raised the prescriptive nature of the risk management responsibilities of downstream users of chemical in the European Union. Under REACH, a downstream user of REACH-registered substances is responsible for ensuring that their uses and the risk management strategies they implement are within the boundaries of what the manufacturer or importer of the substance has registered. In addition, the downstream user is obligated to ensure that the relevant aspect of the risk management strategy are communicated down the supply chain as part of the REACH extended Safety Data Sheet (eSDS). Compliance with this regulation presents a unique situation to the practicing industrial hygienist wherein there is a statutory obligation to implement a risk management strategy that fits within the boundaries of the strategy registered by the registrant. In addition to fitting a risk management strategy within the boundaries of the registration, downstream users must also reconcile registered and intended uses; foster for the co-existence of REACH exposure and release limits with traditional limits; and manage the potentially redundant, incompatible, or even contradictory risk management strategies for multiple registered substances within a process or mixture.

- **Impact of Supplier Risk Management Measures on the Practice of Industrial Hygiene.** R. Skoglund, 3M, St. Paul, MN.

- **Practical Use of the REACH eSDS in the Workplace.** D. Deeds, Industrial Health & Safety Consultants, Shelton, CT.
- **Using Chemical Testing Data from REACH Registrations to Strengthen Occupational Health Risk Assessments.** R. Roy, 3M Company, St Paul, MN.
- **Resolving Conflicting Information: Interplay Between REACH Exposure Data Submissions and OELs.** P. Harper, ENVIRON, Phoenix, AZ.
- **Evaluation of Tier 1 Models Used for REACH.** M. van Tongeren, Institute of Occupational Medicine, Edinburgh, United Kingdom.
- **A Simple Framework for Validating Worker Exposure Models Utilizing Available Monitoring Data.** P. Logan, 3M, St. Paul, MN.

CR 309

Advancing EH&S Program Traction Through Sustainability Alignment

2:00 p.m.-3:00 p.m. | Palais, 516d

Presenter: L. Vallee, Harleysville, a Nationwide Insurance Company, Harleysville, PA.

Corporate Social Responsibility initiatives offer sustainability alignment opportunities that fuel support for EH&S agendas. While consumer confidence in climate change predictions is slowly growing, sustainable companies are reaping profitability and brand benefits now from “rethinking” stewardship of carbon footprint, waste reduction/product life cycle, water management, and EH&S best practices. Limited sustainability “road maps” exist, particularly for safety, but global efforts are under way to secure safety metrics in public sustainability reporting. Presentation concludes with discussion of a 5-Step Sustainability Traction Plan.

PO 122

Risk Assessment/Risk Management Research

2:00 p.m.-4:30 p.m. | Palais, 513a

Arrangers: B. Heckman, LaCroix Davis LLC, Carlisle, PA; M. Canright, Forensic Analytical Consulting Services, San Diego, CA. **Moderator:** M. Sullivan, California State University at Northridge, Northridge, CA. **Monitors:** D. Martin, Pacific Biosciences, Menlo Park, CA; J. McInnis, Boilermakers International, Fall River, NS, Canada.

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

SR-122-03 Use of Modified Delphi Method as a Process for the Development of Occupational Exposure Limits. A. Plaza, NASA JSC, Houston, TX; L. Whitehead, G. Delclos, University of Texas, Houston, TX.

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

SR-122-02 Cumulative Risk Assessment Approaches for Use in Community and Occupational Settings. P. Williams, E Risk Sciences, LLP, Boulder, CO; S. Dotson, NIOSH, Cincinnati, OH; A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH.

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

SR-122-01 Cumulative Exposures to Dusts and Asbestos Fibers from Drywall Finishing. F. Boelter, R. Jones, Y. Xia, L. Dell, ENVIRON, Chicago, IL.

3:30 p.m.-4:00 p.m.

SR-122-04 Choosing Which PEL's to Update. F. Mirer, Hunter College, New York, NY.

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

SR-122-05 Comparison of a Tracer Gas Study in a Residential Basement with a Box Decay Model and a Computational Fluid Dynamics (CFD) Model. A. Haugh, C. Strode, R. Strode, J. Rasmuson, A. Korchevskiy, D. Hall, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

PO 123

Environmental Issues

2:00 p.m.-4:30 p.m. | Palais, 513d

Arranger: L. Wong, University of California, Oakland, CA. **Moderator:** M. Gillie, Tetra Tech GEO, King of Prussia, PA. **Monitors:** E. Erikson, Guida, Slavich & Flores, P.C., Dallas, TX; S. Celly, Celly Services, Inc., Long Beach, CA.

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

Committee Award: Rachel Carson Award. M. Gillie, Tetra Tech GEO, King of Prussia, PA.

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

CS-123-01 NYC Brownfield Cleanup Program Is First Municipal Program to Receive Federal Recognition. M. Drozdov, CES Environmental & Training Center, New York, NY.

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

CS-123-02 Investigation on a Massive Legionnaires' Disease Outbreak Caused by *Legionella pneumophila* in Quebec City (Canada) During Summer 2012. I. Goupil-Somany, L. Alain, M. Legris, D. Pereg, J. Duchesne, G. Kervran, F. Desbiens, C. Huot, A. Routhier, R. Levaque, M. Pigeon, J. Riffon, P. Auger, M. Frigon, G. Trudeau, J. Villeneuve, N. Theriault, M. Messely, N. Boulianne, D. Laliberte, Agence de la Sante et des Services Sociaux de la Capitale-Nationale, Quebec, QC, Canada; G. De Serres, Institut National de Santé Publique du Québec, Quebec, QC, Canada.

3:30 p.m.-4:00 p.m.

CS-123-03 Quebec City Legionnaires' Disease Outbreak: Discrepancies in International Guidelines. D. Pereg, J. Duchesne, M. Legris, L. Alain, P. Auger, I. Goupil-Somany, G. Kervran, R. Levaque, F. Desbiens, M. Pigeon, J. Riffon, A. Routhier, C. Huot, M. Frigon, G. Trudeau, J. Villeneuve, N. Theriault, M. Messely, N. Boulianne, N. Boulianne, D. Laliberte, Agence de la Sante et des Services Sociaux de la Capitale-Nationale, Quebec, QC, Canada; P. Chevalier, G. De Serres, Institut National de Santé Publique du Québec, Quebec, QC, Canada.

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

CS-123-04 New Method Reduces Asbestos to Harmless Sludge that Is Easily Disposed. M. Drozdov, CES Environmental & Training Center, New York, NY.

PO 124

Aerosols II

2:00 p.m.-5:00 p.m. | Palais, 514

Arranger/Moderator: M. Isenstein, U.S. Army, Japan. **Monitor:** P. O'Shaughnessy, University of Iowa, Iowa City, IA.

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

David L. Swift Award. M. Isenstein, USACHPPM, Aberdeen Proving Ground, MD.

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

SR-124-01 Human Aspiration Efficiency Estimates: Orientation-Averaged, Slow-Moving Air, Mouth-Breathing. K. Anderson, T. Anthony, University of Iowa, Iowa City, IA.

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

SR-124-02 Characterization of Aerosol Emission from the Burst of a Single Film. C. Hsu, P. Chen, S. Huang, J. Chen, N. Wu, C. Chen, National Taiwan University, Taipei, Taiwan.

3:30 p.m.-4:00 p.m.

SR-124-03 Samplers/Pre-Separators for Aerosol Fractions Depositing in the Gas-Exchange Region and the Anterior Part of the Nose. G. Lidén, J. Waher, Stockholm University, Stockholm, Sweden; A. Gudmundsson, Lund University, Lund, Sweden.

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

SR-124-04 Deposition of Carbon Nanotubes in a Human Airway Replica. W. Su, Lovelace Respiratory Research Institute, Albuquerque, NM.

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

SR-124-05 Diffusive Separation Efficiency by Particle Number and Mass of Samplers/Pre-Separators for the Aerosol Fractions Depositing in the Gas-Exchange Region and the Anterior Part of the Nose. G. Lidén, J. Waher, K. Holm, K. Rosman, Stockholm University, Stockholm, Sweden; S. Bau, Institut National de Recherche et de Sécurité, Vandoeuvre Les Nancy, France; C. Monz, Institut für Gefahrstoff-Forschung der Berufsgenossenschaft Rohstoffe und chemische Industrie, Bochum, Germany; C. Möhlmann, Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung, St Augustin, Germany.

PO 125

Green Building/LEED

2:00 p.m.-5:00 p.m. | Palais, 515

Arranger: J. Hicks, Exponent, Inc., Oakland, CA. **Moderator:** P. Rey, Exponent, Inc., Oakland, CA. **Monitors:** A. Relyea, L. Rogers, Mycometer US.

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

SR-125-01 Moving into Green Healthy Housing: The Yield in Health (The MIGHTY Study). D. Jacobs, S. Dixon, J. Breyse, National Center for Healthy Housing, Washington, DC.; E. Ahonen, University of Illinois at Chicago, Chicago, IL.



Offering Enlightenment and Knowledge — In a Hurry!

2:30 p.m.-4:00 p.m. | Palais, 710a

Moderator: P. Logan, 3M, St. Paul, MN.

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

The IGNITE session originated in the high-technology profession but has spread worldwide. In a five-minute presentation, speakers share their professional and personal passions using 20 slides that auto advance every 15 seconds. AIHce is offering its own version of IGNITE. Learn what's on the mind of your colleagues and friends in this innovative and engaging new format. Find out why this program has become an international phenomenon and why there was standing-room only attendance last year!

Experience firsthand what is meant by the IGNITE motto, "Enlighten us, but make it quick!"

- **What the Heck Happened After I Got My Dad's Ring Back?**
J. Klane, Arizona State University, Tempe, AZ.
- **Blue Sky Mining**
C. Ficklen, SQA2, Inc., Hampton, VA.
- **Feeling Funky, "Phat," & So Fine Through IH Fitness**
K. Chapital, Tulane University, New Orleans, LA.
- **Why Social Networking is a Necessity for IHs in Today's World**
D. Weekes, InAIR Environmental, Ltd., Ottawa, ON, Canada
- **Paris in the Spring**
J. Kunz, 3M
- **My Love/Hate Relationship with Conference Calls**
C. Johnson, GE, Billerica, MA.
- **You Want Me to Sample What?**
B. Bullock, CSX Transportation, Jacksonville, FL
- **On Your Own — Steer Any Direction You Choose**
Y. Zhen, Belzona Global LLC, Miami, FL.
- **Demonstrating Your Passion for Industrial Hygiene**
N. Zimmerman, Purdue University, W. Lafayette, IN.
- **Deep Survival**
S. Bucherl, pH2, LLC, Indianapolis, IN.
- **The Artist's Path to Industrial Hygiene: How Everyday Fieldwork Becomes Artwork**
M. Griffin, Tulane University, New Orleans, LA.
- **Embracing Your Inner Nerd**
K. Merrit, SQA2, Inc., Hampton, VA

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

CS-125-02 Eight Ways to Fail LEED IAQ Testing. D. Walsh, Walsh Certified Consultants, Inc., Las Vegas, NV.

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

CS-125-05 Indoor Air Quality Comes to Building Codes: The IgCC. D. Walsh, Walsh Certified Consultants, Inc., Las Vegas, NV.

3:30 p.m.-4:00 p.m.

CS-125-06 Specifying Architectural Coatings with an IH on the Team. C. Bobenhausen, Viridian Energy & Environmental, a Vidaris Company, New York, NY.

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

CS-125-03 Objectives of an IAQ Management Plan During Construction for LEED. L. Weekes, D. Weekes, T. Lucas, InAIR Environmental Inc., Ottawa, ON, Canada.

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

CS-125-04 Leed IAQ Sampling. L. Weekes, D. Weekes, T. Lucas, InAIR Environmental Inc., Ottawa, ON, Canada.

RT 222

Heavy Metal Exposure in Economically Under-Developed Communities

2:00 p.m.-5:00 p.m. | Palais, 519

Arranger: W. Carter, The University of Findlay, Shaker Heights, OH. **Monitors:** M. Akram, Columbia University, New York, NY; C. Sall, Comprehensive Health Services, Inc., Vienna, VA.

Heavy metal exposure in economically underdeveloped communities is a problem worldwide. Of particular concern are vulnerable populations such as children, elderly, and expectant mothers. This session will discuss some of the adverse health effects of the most common heavy metal exposures of concern, including lead, arsenic, mercury, and cadmium. Examples of studies among First Nation people of Canada and the U.S., as well as economically deprived populations in Africa and Asia, will be presented. With each of these studies, effective remediation methods to reduce continued exposure will be described. A presentation of a draft AIHA® reference document will be made that addresses childhood exposure to lead in countries of the former Soviet Union.

- **Adverse Effects of Prominent Toxic Elements and Body Fluid/Tissue Levels of Concern.** E. Nieboer, McMaster University, Hamilton, ON, Canada.
- **Lead in Soil in the Republic of Kazakhstan: Best Practices of Measurements and Interpretation.** R. Olsen, CDM, Denver, CO.
- **Does Development in the Water Sector Need a New Paradigm? Tales from Nepal and South Dakota.** L. Smith, Filter-For-Families, Wheat Ridge, CO.

- **Estimating Health Risk for Metallic Mercury Vapor Exposures Among Small-Scale Gold Mining Communities.** C. Muianga, Eduardo Mondlane University, Maputo, Mozambique.
- **Intercommunity Comparison of Blood Lead Concentrations in Eeyou Istchee, and Identification of Sources.** I. Martin, University of Waterloo, Elora, ON, Canada.
- **Childhood Lead Poisoning in the Former Soviet Republics.** A. Korchevskiy, Chemistry & Industrial Hygiene, Inc., Wheat Ridge, CO.

RT 223

PCBs in Construction

2:00 p.m.-5:00 p.m. | Palais, 511a

Arranger: J. Springston, TRC Environmental, New York, NY. **Moderator:** B. Ashley, TRC Environmental, Honolulu, HI. **Monitors:** S. Fess, Xerox Corporation, Webster, NY; D. Weekes, InAIR Environmental, Ltd., Ottawa, ON, Canada.

The presence of PCBs in caulking and other building materials is a public health concern in both public and commercial buildings. Between 1925 and 1978, more than 1.5 billion pounds of PCBs were produced in the U.S. for use in electrical equipment, hydraulics, paints, plastics, and numerous commercial and industrial uses. Although the manufacture and most uses of PCBs were banned in the U.S. in 1979, studies estimate that tons of PCB-containing building materials, including mastics, sealants, caulking, acoustic ceiling tiles, and other building products, remain in place and may help contribute to elevated indoor air PCB concentrations. A recent Boston-area study found that one-third of the buildings surveyed, including elementary, middle, and high school facilities, contained building materials with PCB concentrations well in excess of the EPA's allowable limits. This is a worldwide problem, with almost half of all concrete/masonry buildings constructed between 1955 and 1975 having PCB-containing joint sealants and caulking. As a result, the potential for PCB indoor air contamination in older buildings that were built during the peak availability and application of PCB-laden building materials is significant.

- **PCBs in the Construction Environment — History and Use.** R. Adams, ENVIRON International Corporation, Princeton, NJ.
- **Health Effects of PCBs in the Indoor Environment.** D. Carpenter, University at Albany, Rensselaer, NY.
- **PCB Emissions from Building Sealants and Factors that Influence Exposure and Risk to Building Occupants.** K. Coghlan, Environmental Health & Engineering, Needham, MA.
- **An Overview of the NYC Schools PCB Pilot Program.** J. Springston, TRC Environmental, New York, NY.
- **Global Impact of the New York PCB Investigations.** R. Herrick, Harvard University, Boston, MA.
- **Handling PCBs in Building Materials.** D. Woody, ERSI, Schenectady, NY.

RT 224**Problems and Solutions in Datalogging and Alarm Setting Logic for Real-Time Instruments**

2:00 p.m.-5:00 p.m. | Palais, 520a

Arranger/Moderator: J. Hill, Alameda, CA. **Monitors:** L. Hartline Weems, Center for Toxicology and Environmental Health, LLC, North Little Rock, AR; W. Max, Battelle Memorial Institute, Atlanta, GA.

The power of real-time detection systems to identify and communicate hazards to workers and management continues to expand rapidly. Critical parameters for setting datalogging and alarm limits to manage risks from a working environment are a problem. This includes comprehension by the industrial hygienist of the complexities of the instrument, coupled with knowledge by the user in the working environment have been demonstrated to be lacking. For those who have not invested sufficient energy into understanding how it all fits together, the consequences could be as simple (and embarrassing) as recording too much data through too brief a recording interval, or as egregious as providing an instrument unresponsive to the hazard one is trying to manage. This roundtable will bring together experts in instrument manufacturing, training, and experienced users from a variety of industrial settings to discuss common problems in datalogging and alarm setting parameter selection. Working together on a current project team, the speakers will present the progress in creation of an algorithm to follow when determining these parameters for use in field applications. There will be a Q&A period, along with a discussion and brainstorming at the end of this session.

- **Methods Used for Logging Data in Real-Time Detection Instruments.** D. Wagner, Industrial Scientific Corporation, Oakdale, PA.
- **Evaluation of Portable Single-Gas Monitors for the Detection of Low Levels of H₂S and SO₂ in Petroleum Industry Environments.** M. Hemingway, Health and Safety Laboratory, Derbyshire, United Kingdom.
- **Gas Detector Design Capabilities Versus Ever Lower TLV® Exposure Limits.** B. Henderson, GfG Instrumentation, Ann Arbor, MI.
- **WITHDRAWN: From then to Now. Use of Direct-Reading instruments for Confined Space Entry and Hazardous Waste Site Work.** G. Crawford, Weston Solutions, Westchester, PA.
- **There Is a Method to Properly Set Alarm Limits and Data Logging Parameters While Using Photo Ionization Detectors (PID) Under Different Environmental Situations.** C. Wrenn, EnvirionicsUSA, Los Gatos, CA.

RT 225**Control of NORM (Naturally Occurring Radioactive Material) Hazards: Herman Cember Memorial Roundtable**

2:00 p.m.-5:00 p.m. | Palais, 511c

Arranger/Moderator: C. Marlowe, CDM Smith, Scotch Plains, NJ. **Monitors:** R. Johnson, Radiation Safety Counseling Institute, Rockville, MD; J. Kenoyer, Dade Moeller, Oak Ridge, TN.

Ionizing radiation arises most famously in the nuclear fuel cycle (use of uranium and transuranics to make power, medicines, and weapons). However, most industrial hygienists are much more likely to encounter radiation from NORM (Naturally Occurring Radioactive Material) and TENORM (Technologically Enhanced Naturally Occurring Radioactive Material). All citizens receive radiation doses from radon in the air, mineral salts in water, naturally occurring isotopes in food, and minerals in soil. Employees receive additional doses from meters, gauges, analyzers, and from processes that separate or treat products from the earth. Industrial hygienists might ask questions like: Where should we look for NORM? How much risk does it create? What processes create TENORM? and How should we measure it?

- **NORM Measurements.** R. Johnson, Radiation Safety Counseling Institute, Rockville, MD.
- **WITHDRAWN: NORM Regulations.** D. Kocher, SENES Oak Ridge, Oak Ridge, TN.
- **How to Deal with Worker Concerns for NORM.** R. Johnson, Radiation Safety Counseling Institute, Rockville, MD.
- **Herman Cember Memorial Lecture.** W. Wang, Louisiana State University, Baton Rouge, LA.
- **NORM for Industrial Hygienists – From an Applied Health Physicist's Point of View.** W. Wang, Louisiana State University, Baton Rouge, LA.
- **Radiation Protection and Environmental Monitoring Plans at Unlicensed Facilities.** R. Johnson, Radiation Safety Counseling Institute, Rockville, MD; P. Egidi, U.S. Environmental Protection Agency, Washington, DC.
- **Radon Progeny Doses and Risks Related to Consumer Use of Marcellus Shale Natural Gas.** R. Johnson, King & Spalding, Washington, DC.

RT 226**Ethics: Global and Emerging Issues**

2:00 p.m.-5:00 p.m. | Palais, 516a

Arranger/Moderator: N. Rice, Intermountain Healthcare, Salt Lake City, UT. **Monitor:** S. Gaffney, ChemRisk, Inc., San Francisco, CA; N. McClellan, Abbott Laboratories, Port Barrington, IL.

The phenomenon of globalization has changed the way we conduct business and trade. Further,

globalization has changed the way individuals think and interact with one another, sometimes surfacing differences in how individuals define and accept "ethical practice." In this global environment, what do industrial hygienists ethically owe our fellow workers and human beings? How can we establish commonality and improve working and living conditions for others? This roundtable will set a foundation for understanding ethical behavior and the factors that influence it. A variety of global industrial hygiene issues will be discussed from an ethics perspective. Current ethics issues explored include human trafficking, volunteering for an international worker health NGO, global climate change, and practicing industrial hygiene across borders.

- **Ethics – An Overview – Doing What Is Right.** G. Barbi, Becton Dickinson, Franklin Lakes, NJ.
- **Human Trafficking – Ethical Considerations.** S. Chiusano, U.S. Department of Defense, Columbia, MD.
- **Ethics, Volunteering, and Global Health.** M. Levitsky, Workplace Health without Borders, Toronto, ON, Canada.
- **Practicing Industrial Hygiene Across Borders.** J. Singh, Golder Associates, Inc., Kamuela, HI.
- **An International Code for Ethical Practice, and Case Studies.** J. Throckmorton, University of Utah, Salt Lake City, UT.
- **Global Climate Change and Industrial Hygiene: What Ethical Duties Are Reasonable for Science-based Professionals?** B. Lippy, The Lippy Group, LLC, Baltimore, MD.

CR 310**Ambient Environmental Air Monitoring During Outdoor Remediation Activities**

3:30 p.m.-4:30 p.m. | Palais, 516d

Presenters: T. Irick, K. Thompson, WESA, Ottawa, ON, Canada.

Ambient air around outdoor remediation activities must often be monitored to meet environmental and occupational hygiene requirements. High-volume air sampling is used to monitor ambient air concentrations of parameters such as particulate matter and other contaminants of concern. Hand-held and/or stationary direct-reading instruments configured with visual and audible alarms may be used to establish response protocols. The session will compare and contrast environmental and hygiene methodologies and exposure guidelines, and provide strategies to evaluate environmental and occupational risks.

Wednesday, May 22

7:00 a.m.–4:00 p.m.

Registration, Palais, Viger Hall

7:30 a.m.–6:30 p.m.

Speaker Ready Room, Palais, 516c

8:00 a.m.–9:00 a.m.

General Session



Your Guide to Total Worker Health™

L. Casey Chosewood, MD
Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, Atlanta, GA
Palais, 517

8:00 a.m.–4:00 p.m.

CareerAdvantage Development Fair 2013, Palais, 517d

9:00 a.m.–Noon

ST-04 Old Montreal—A Walking Tour, Walkers depart Palais, Viger Street at 8:45 a.m.

9:00 a.m.–1:30 p.m.

Expo

Passport to Prizes, Expo Theater, Special Displays, Cyber Center, Restaurants, Lounges. No sessions scheduled 9:00 a.m.–10:00 a.m. and Noon–1:00 p.m.

9:30 a.m.–1:00 p.m.

Exhibitor Product Demos and Presentations, Expo Theater, Palais, Expo

9:00 a.m.–1:00 p.m.

Posters

Expo

Poster Session 405

(Graduate and Undergraduate Students)

Authors present 10:00 a.m.–Noon;

Student Poster Awards, 12:30 p.m.–1:00 p.m.

9:00 a.m.–4:00 p.m.

Volunteer Red Carpet Club, Palais 512g

9:30 a.m.–Noon

TT-04 IRSST, Walkers depart Palais, at 9:15 a.m., assemble in Viger Hall.

9:30 a.m.–12:30 p.m.

TT-05 Societe de Transport de Montreal, Bus departs Palais, Viger Street, at 9:15 a.m.

10:00 a.m.–11:00 a.m.

- CR 311 Exposure Scenarios: What You Need to Know to Comply with REACH's ES Requirement, Palais, 520b

10:00 a.m.–11:30 a.m.

Ask the Expert with Dr. L. Casey Chosewood, Palais, 514

10:00 a.m.–Noon

- ABIH Forum, Palais, 516d
- Emerging Issues: Challenges and Benefits of Harmonizing ISO Respiratory Protective Device Standards, Palais, 513d
- PO 126 Communication and Training, Palais, 520a
- PO 127 Nanotechnology II, Palais, 710a
- PO 128 Protective Clothing and Equipment, Palais, 511a
- PO 129 Real-Time Detection Methods and Systems for Extremely Dangerous Atmospheres and Emergency Response, Palais, 515
- RT 227 Duct Cleaning in a LEED Gold Health Care Construction Project, Palais, 516a
- RT 228 GHS: Implementation and Impact on Workplaces in Canada and the United States, Palais, 510a
- RT 229 Health Effects in Children Associated with Parental Exposures, Palais, 513a
- RT 230 Medical Marijuana in the Workplace, Palais, 510b
- RT 231 OELS as a Hierarchy of Tools: Lessons in Global Use and Interpretation, Palais, 710b
- The UnSession, Palais, 520c

10:00 a.m.–12:30 p.m.

- PO 130 Computer Applications, Palais, 511b
- RT 232 Stretching: The Truth, Palais, 511c

11:30 a.m.–12:30 p.m.

- CR 312 Protecting Truck Drivers at Your Facility— and Off, Palais, 520b

12:30 p.m.–1:30 p.m.

Donald E. Cummings Award Lecture, Palais, 510b

12:30 p.m.–2:00 p.m.

EV-07 Luncheon Discussion: Oil and Gas Extraction — Differentiating Health Hazards from Media Hype, Palais, 512a

EV-08 Luncheon Discussion: Exposure Assessment Strategies: Are You Hitting the Bull's Eye?, Palais, 512e

1:00 p.m.–4:30 p.m.

- PO 132 Real-Time Detection, Palais, 516d
- PO 134 Indoor Environmental Quality I, Palais, 514

1:00 p.m.–5:00 p.m.

- PO 131 Industrial Hygiene General Practice, Palais, 513d
- RT 233 Conformity Assessment for Personal Protective Equipment, Palais, 710b
- RT 235 Industrial Hygiene in Mining, Palais, 511a
- SS 003 Exposure Risk Management: Bridging Gaps Between Manufacturing and Product Safety, Palais, 710a

1:30 p.m.–2:30 p.m.

- CR 313 Measuring Implementation of Your H&S Management System, Palais, 513a
- CR 314 Emergency Response: The 3 C's for Managing Safety and Environmental Issues during a Spill Event, Palais, 516a

1:30 p.m.–4:00 p.m.

- PO 135 Physical Stress and Emergent Care Issues During Work/Responses, Palais, 515

1:30 p.m.–4:30 p.m.

- PO 136 Construction, Palais, 511b
- RT 236 Perspectives on Preparing for the CIH Exam v 7.0, Palais, 511c

1:30 p.m.–4:30 p.m.

ST-05 A Taste of Montreal, Bus departs Palais, Viger Street, at 1:15 p.m.

1:30 p.m.–5:00 p.m.

- PO 133 Sampling and Analysis: Trends in Exposure Assessments I, Palais, 520a
- PO 137 Safety, Palais, 520b
- RT 237 Gender and Sex and Occupational Health, Palais, 510a

3:00 p.m.–4:00 p.m.

- CR 315 Prescription Drugs in the Workplace: An Employers' Guide for Screening and Prevention, Palais, 516a

- CR 316 Challenging the Incident Investigation Paradigm, Palais, 513a

5:00 p.m.–8:00 p.m.

- RT 238 Getting Out of the Box — Innovative Approaches to Hearing Conservation, Palais, 515

5:30 p.m.–6:30 p.m.

- CR 317 NFPA 70E Electrical Safety Standard in the Workplace. One Year Later: Progress on Revised Standard Implementation, Palais, 513a

5:30 p.m.–8:00 p.m.

- PO 138 Health Care III: Ergonomics, Compressed Gases, Lasers and Heavy Metal Exposures Issues, Palais, 513d
- PO 139 Respiratory Protection II, Palais, 516d
- RT 239 Occupational Respirable Crystalline Silica: A Global Concern, Palais, 514
- RT 240 Industrial Ventilation: Moving to a World View, Palais, 516a

AIHA®

8:00 a.m.–9:30 a.m.

Pharmaceutical Round Robin Committee,
Palais, 512f

9:00 a.m.–Noon

Construction Committee, Westin, Palais, 8th Floor

9:30 a.m.–11:00 a.m.

Past Presidents' Brunch (by invitation), Sheraton,
Salon 1, Level 2

10:00 a.m.–Noon

Biosafety and Environmental Microbiology
Committee, Westin, Viger, 8th Floor

Nonionizing Radiation Committee, Westin,
Beaver Hall, 8th Floor

Noon–1:00 p.m.

Green Council, Westin, St. Helene, 8th Floor

12:15 p.m.–1:15 p.m.

Orange Council, Westin, McGill, 8th Floor

1:00 p.m.–3:00 p.m.

Noise Committee, Westin, Palais, 8th Floor

Risk Assessment Committee, Westin, Beaver Hall,
8th Floor

3:30 p.m.–5:30 p.m.

Confined Spaces Committee, Westin, Beaver Hall,
8th Floor

Green Building Working Group, Westin, St. Helene,
8th Floor

4:00 p.m.–6:00 p.m.

Fellows Special Interest Group, Sheraton,
Drummond Centre, Level 3

Permanent Conference Committee, Palais, 512f

5:00 p.m.–7:00 p.m.

Career and Employment Services Committee,
Sheraton, Salon 1, Level 2

6:30 p.m.–8:00 p.m.

President's Reception (by invitation), Sheraton,
Salle de bal West, Level 4

AIHA Registry Programs®

1:00 p.m.–3:00 p.m.

SME Team Meeting: 4-Gas/PID, Palais, 512d

1:00 p.m.–5:00 p.m.

SDS and Label Authoring Registry Examination,
Palais, 512h

Ancillary

1:00 p.m.–5:00 p.m.

Forest Products Industrial Hygiene Forum, Sheraton,
Salon 7, Level 3

3:00 p.m.–6:00 p.m.

AAR Railroad Industrial Hygiene Forum, Sheraton,
Salon 6, Level 3

5:00 p.m.–9:00 p.m.

McGill University Occupational Health Alumni
Reunion, Thompson House, McGill University,
3650 McTavish Street

5:30 p.m.–7:30 p.m.

University of South Florida Reception, Sheraton,
Salon 3, Level 2

6:00 p.m.–8:00 p.m.

Canadian Occupational Hygiene Reception, Spon-
sored by the Canadian Registration Board of Oc-
cupational Hygienists (CRBOH), Intercontinental
Hotel, Maisonneuve

Note Meeting Rooms ...

Palais des congrès de Montreal = Palais
Le Centre Sheraton Montreal = Sheraton
Le Westin Montreal = Westin

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SIGMA-ALDRICH®

General Session

8:00 A.M.–9:00 A.M. | PALAIS, 517

Your Guide to Total Worker Health™

L. Casey Chosewood, MD, Senior Medical Officer for Total Worker Health™, NIOSH, Centers for Disease Control and Prevention, Atlanta, GA

The exposures facing the modern worker are more challenging than ever before. Whether physical, environmental, psychological, social, cultural, familial, communal, or a combination of these, addressing today's exposures requires swift action, a high level of professional judgment, and broader perspectives.

This fast-paced, example-filled presentation will challenge your current notion of what is work related and what isn't, what really matters when it comes to health and safety interventions and why our past approaches to lower injury and illness rates aren't sufficient to ensure future success.

Want to really improve the health of all workers? You'll need a new strategy, new tools, new approaches, and a willingness to say good-bye to what no longer works.

An Ask the Expert Session follows,
10:30 a.m.–11:30 a.m., in room 514.



Exhibitor Product Demos and Presentations

9:30 a.m.–12:30 p.m. | Expo Theater

9:30 a.m.

AtlasWork™: Reduce Injuries and Losses By Better Managing Work Requirements, Risk, and Restrictions, Atlas Ergonomics

The presentation will demonstrate how AtlasWork™, a web-based software application, breaks down information silos that often exist within injury prevention and management programs. It also ensures data and performance metrics are consistent and up-to-date.

10:00 a.m.

Prevent An Accident from Becoming an Incident: How to Reduce Risk and Increase Safety with Wireless Gas Detectors, RAE Systems

RAE Systems will present how industry-leading chemical gas detection systems can be wirelessly connected to provide real-time, 24/7 monitoring for occupational health and environmental safety professionals. Successful case studies using wireless 5 gas / PID, NDIR, EC, and LEL technologies will be presented for the AIHce audience.



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

10:30 a.m.

Real-Time Lockout-Tagout Status and Program Audit Tool: ESC Provides Solutions for LOTO Programs, ESC Services, Inc.

See real-time status of your current equipment lockouts, manage every procedure and employee audits with tracking and process prompts, and track all data live via web portal access. WR codes allow quick access to procedures, and procedure updates are retrieved by an iPad, so current procedures are always available. Program uses an independent web portal for tracking of data, file management, and record retention. Turnkey installation; own your program with third-party guidance.

11:00 a.m.

Good Lab Practices with Powder Handling in an OEL 3 and 4 Environment, Flow Sciences, Inc.

Powders and potent compounds used in R&D environments can be light and fluffy (micron to nano). These harmful particulates can create serious personnel exposures. Flow Sciences designs safety containment solutions for personal protection.

Noon

Using the Latest Industry Guidelines to Assess the Required Minimum Volumetric Rate Capabilities of Chemical Fume Hoods, Labconco Corporation

The recognized acceptable minimum volumetric rate (CFM) of air for fume hood exhaust is typically cited from National Fire Protection Association's NFPA 45 minimum notation of 25 CFM per interior square foot of work area.

CR 311

Exposure Scenarios: What You Need to Know to Comply with REACH's ES Requirement

10:00 a.m.-11:00 a.m. | Palais, 520b

Presenter: K. Blake, 3E Company, Carlsbad, CA.

REACH requires all companies manufacturing, importing, distributing, or using chemical substances on their own, in mixtures or in articles, to examine their chemical inventory closely for substances within the scope of the regulation to ensure compliance. The required contents of the EU SDS has recently been amended, making the development of conforming SDSs a complex undertaking. In this session, the speaker will explore these new requirements and discuss best practices for conformance.

Special Session

Ask the Expert with L. Casey Chosewood, MD

10:00 a.m.-11:30 a.m. | Palais, 514

Moderator: T. Nalbene, PhD, CIH, University of Texas at Tyler, Tyler, TX

Following today's General Session on "Your Guide to Total Worker Health™", join L. Casey Chosewood, MD at this special "Ask the Expert" session.

ABIH Forum

10:00 a.m.-Noon | Palais, 516d

EMERGING ISSUES

Challenges and Benefits of Harmonizing ISO Respiratory Protective Device Standards

10:00 a.m.-Noon | Palais, 513d

Arranger: R. Metzler, NIOSH, Pittsburgh, PA.
Moderator: J. Szalajda, NIOSH, Pittsburgh, PA.
Monitors: J. Johnson, JSJ and Associates, Pleasanton, CA; J. Parker, NIOSH, Pittsburgh, PA.

In 2002, NIOSH was approved as the American National Standards Institute's U.S. Sponsoring Standards Development Organization for the International Organization for Standardization's Technical Committee 94 Personal Safety Protective Clothing and Equipment, Subcommittee 15 (TC94SC15) Respiratory Protective Devices. U.S. experts have invested significant expertise and time conducting research and round-robin testing. Twenty-one voting nations are working collaboratively to draft respiratory protective device performance standards based on the needs of the wearers rather than around the capabilities of present day respirator technologies. Several technical specifications involving physiology, anthropometrics, and ergonomics have been completed to support the product standards writers. Thus

far, seven outputs of the TC94SC15 subcommittee have been approved and published as International Standards to date, and over 25 ISO documents are in various stages of development. The respirator standards, ISO 17420 – Parts 1 & 2 are scheduled for publication in 2014. The objective of this roundtable is to educate participants on potential national and international benefits and challenges of internationally harmonized respiratory protective device and conformity assessment standards with current NIOSH and OSHA standards.

- **Overview of ISO Standards – What, When, and Why?** W. Drews-Dräger, Dräger Safety AG & CoK-GaA, Lubeck, Germany.
- **Comparison of Key ISO RPD Standards to NIOSH 42CFR84 Standards.** R. Metzler, NIOSH, Pittsburgh, PA.
- **Canadian Perspective.** E. Gudgin Dickson, CBRN Protection Group, Kingston, ON, Canada.
- **Manufacturer's Perspective.** R. Weber, 3M, St. Paul, MN.
- **Respirator User and Wearer Needs.** M. Claytron, HSL, Buxton, United Kingdom.
- **Conformity Assessment Standards – A Necessity for Respiratory Protective Devices.** R. Metzler, NIOSH, Pittsburgh, PA.

PO 126

Communication and Training

10:00 a.m.-Noon | Palais, 520a

Arranger: J. Zey, University of Central Missouri, Warrensburg, MO. **Moderator:** S. Lynch, Auburn University, Auburn, AL. **Monitors:** P. Georgevia, D. Potje, University of Central Missouri, Warrensburg, MO.

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

CS-126-01 Educating Industrial Hygienists at a Canadian School of Public Health. A. Sass-Kortsak, P. Bozek, L. Ceolin, J. Foisy, University of Toronto, Toronto, ON, Canada.

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

CS-126-02 Providing Training Across Diverse and Disconnected Groups. M. Bannister, IFAP, Perth, Australia.

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

CS-126-03 Academic Program Assessment Using Alumni Opinions. J. Zey, University of Central Missouri, Warrensburg, MO.

11:30 a.m.-Noon

CS-126-04 Strategic Communication Plans for the Hygienist. K. White, Sporometrics, Toronto, ON, Canada.

PO 127

Nanotechnology II

10:00 a.m.-Noon | Palais, 710a

Arranger/Moderator: C. Tsai, University of Massachusetts Lowell, Lowell, MA. **Monitors:** J. Dimitri, IBM, Yorktown Heights, MA; P. Webb, Webb Associates, LLC, Worcester, MA.

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

SR-127-01 Nanoparticle Measurement Using Real-Time Aerosol Monitors. C. Beaucham, NIOSH, Cincinnati, OH; T. Pearce, Z. Zhuang, NIOSH, Pittsburgh, PA.

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

SR-127-02 Carbon Nanotube and Nanofiber Exposure Assessments: An Overview of 15 Site Visits. M. Dahm, D. Evans, M. Schubauer-Berigan, E. Birch, J. Fernback, J. Deddens, NIOSH, Cincinnati, OH.

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

CS-127-03 Evaluation of the Thermophoretic Personal Air Sampler (TPS) for Collection of Nanoparticles. K. Rickabaugh, G. Casuccio, T. Lersch, M. Zock, RJ Lee Group, Monroeville, PA; J. Volckens, D. Leith, Colorado State University, Fort Collins, CO.

11:30 a.m.-Noon

SR-127-04 On Methods Suitable to Assess the Containment Efficiency of Fume Hoods and Safety Cabinets with Respect to Nanoparticles. E. Belut, INRS, Nancy, France; V. Cesard, INRS, Vandoeuvre, France.

PO 128

Protective Clothing and Equipment

10:00 a.m.-Noon | Palais, 511a

Arranger/Moderator: S. Thomas, Oregon OSHA, Salem, OR. **Monitors:** R. Grossnickle, Henry M. Jackson Foundation, Bethesda, MD; V. Garner, SWS Environmental Services, Panama City Beach, FL.

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

SR-128-01 Permeation of Cyclohexanol Through Disposable Nitrile Gloves. S. Que Hee, A. Mathews, UCLA, Los Angeles, CA.

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

SR-128-02 Permeation of 2-Ethoxyethanol Through Purple Disposable Nitrile Gloves. S. Banaee, UCLA, Arcadia, CA; S. Que Hee, UCLA, Los Angeles, CA.

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

CS-128-03 Surface and Skin Fiber Sampling Related to the Use of a Cut-Resistant Sleeve. D. Ceballos, L. Tapp, D. Wiegand, NIOSH, Cincinnati, OH.

11:30 a.m.-Noon

SR-128-04 Cooling System to Alleviate Heat Stress in Hazmat Suits. G. Srinivas, TDA Research, Inc., Golden, CO.

PO 129

Real-Time Detection Methods and Systems for Extremely Dangerous Atmospheres and Emergency Response

10:00 a.m.-Noon | Palais, 515

Arranger/Moderator: P. Smith, OSHA, Sandy, UT.
Arranger: J. Hill, Alameda, CA. **Monitors:** P. Owens, Shell Martinez Refinery, Martinez, CA; J. Wallace, ExxonMobil Production Company, Houston, TX.

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

CS-129-01 Counterterrorism and Industrial Hygiene: Applying Real-Time WMD Detection Technologies and Countermeasures in a Mass Transit Environment — A Case Study. C. Burrus, MTA/NYC Transit, Brooklyn, NY.

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

SR-129-02 Development of Methods for a Portable Gas Chromatograph-Mass Spectrometer for Rapid On-Site Measurements of Fumigants. M. Elliott, A. Foote, NIOSH, Cincinnati, OH.

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

CS-129-03 Cold Vapor Atomic Fluorescence Spectroscopy: A New Approach to Mercury Vapor Analysis. G. Rowe, Arizona Instrument LLC, Chandler, AZ.

11:30 a.m.-Noon

SR-129-04 An Air Analysis Method for Extremely Toxic Atmospheres. J. Driscoll, PID Analyzers, LLC, Sandwich, MA; P. Smith, OSHA, Salt Lake City, UT.

RT 227

Duct Cleaning in a LEED Gold Health Care Construction Project

10:00 a.m.-Noon | Palais, 516a

Arranger: E. Stewart, Kaiser Permanente, Oakland, CA. **Moderator:** L. Nguyen-Weekes, InAir Environmental, Ltd., Ottawa, ON, Canada. **Monitors:** V. Puhlovich, W. Xu, Kaiser Permanente, Pasadena, CA.

Duct cleanliness is an important consideration in health care construction. The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system requires health care facility construction to follow the Facility Guideline Institute's Design for the Construction of Health Care Facilities and ASHRAE's Standard 170, which requires that the permanent heating, ventilating and air-conditioning system not be operated during construction unless the air distribution system is protected from contamination. This roundtable will explore the experience of a LEED-NC Gold hospital and specialty medical office building construction project with testing and complying with these guidelines because it was necessary to operate the system during construction, and filter breaches were discovered.

- **Just Because You Have a Good Specification Doesn't Guarantee You Will Get a Clean HVAC System.** J. Hunt, Kaiser Permanente, Portland, OR.
- **What Are the Standards and Guidelines for Assessing Clean HVAC Systems?** E. Stewart, Kaiser Permanente, Oakland, CA.
- **Mitigating and Managing Out of Spec HVAC Systems During Construction.** J. Slinger, Andersen Construction, Portland, OR.
- **LEEDing the Way in Duct Cleanliness and Filtration in Health Care Facilities.** A. Jarvis, Mazzetti + Nash Lipsey Burch, Portland, OR.

RT 228

GHS: Implementation and Impact on Workplaces in Canada and the United States

10:00 a.m.-Noon | Palais, 510a

Arranger/Moderator: L. Davison, CCOHS, Hamilton, ON, Canada. **Monitors:** J. Callaghan, CCOHS, Hamilton, ON, Canada; R. Quenneville, T. Harris & Associates, Toronto, ON, Canada.

GHS — the Globally Harmonized System of Classification and Labeling of Chemicals — provides a comprehensive standard for the classification of chemical hazards and communication of information on labels and safety data sheets (SDSs). OSHA HazCom 2012 adopted GHS and transitioning to GHS is under way in the U.S. Similar changes to Canadian WHMIS are expected in 2013. GHS implementation will have significant impacts on manufacturers and suppliers of chemical products and, subsequently, on users of chemical products. With representation from the Canadian GHS implementation team (federal and provincial governments, industry, and labor), this roundtable will describe challenges, solutions, and opportunities, as well as lessons learned from the U.S. implementation. Emphasis will be on the health and safety impact in workplaces and the measures that employers, labor unions, and IH specialists can take to prepare for GHS implementation.

- **GHS in Canada: Update from Health Canada.** R. Miller-Lee, Health Canada, Ottawa, ON, Canada.
- **WHMIS After GHS: Update from Provincial Regulators.** R. Blais, WorkSafe New Brunswick (NB), Saint John, NB, Canada.
- **GHS Resources: SDSs, Labels, and Training.** J. Chappel, CCOHS, Hamilton, ON, Canada.
- **One Year Later—GHS Lessons Learned from America.** D. Deeds, Industrial Health & Safety Consultants, Inc. (IH&SC), Shelton, CT.
- **Preparing for GHS in Canada: The Employer Perspective.** J. Cerf, Chemistry Industry Association of Canada (CIAC), Montréal, QC, Canada.
- **Labour's Perspective on GHS in Canada and the United States.** L. Stoffman, Canadian Labour Congress, Vancouver, ON, Canada.

RT 229

Health Effects in Children Associated with Parental Exposures

10:00 a.m.-Noon | Palais, 513a

Arranger/Moderator: S. Viet, Westat, Rockville, MD. **Monitors:** R. Burton, University of Minnesota, Minneapolis, MN; T. Hall, University of Oklahoma, Edmond, OK.

Industrial hygienists have long been aware of the potential impact of parental occupational exposures on children's health, e.g., in recognizing that both paternal and maternal lead exposure affected fertility and birth outcomes, and that workplace chemicals "taken home" could subsequently expose and harm family members. Since passage of the Children's Health Act of 2000, there has been increasing interest in occupational and environmental exposures that impact the health of children. This session will explore the different methodologies being used to examine parental concurrent occupational and environmental exposures and health outcomes among children in several recent and ongoing birth cohorts. The Childhood Autism Risk from Genetics and Environment (CHARGE) Study examines the association of parents' self-reported occupational exposures and incidence of Autism Spectrum Disorder (ASD) in their children. In the U.S. Navy's incidence study of birth defects among children of U.S. military personnel conceived in Naples, Italy, environmental monitoring addressed trash burning, urban air pollution, groundwater, and occupational sources. A longitudinal Thai birth cohort study is collecting multiple urinary and blood-based markers of exposure collected during pregnancy in mothers exposed to pesticides in a mobile agricultural environment and early neurological development in their offspring. The Women's Health in Apprenticeship Trades — Metalworkers and Electricians (WHAT-ME) cohort is examining the correlation between first trimester urinary manganese and other metals concentrations and neurological effects on the fetus of women in non-traditional trades, particularly welding. Speakers will discuss issues with conducting these studies and present up-to-date findings and future plans for their ongoing studies.

- **Parental Occupational Exposures and Autism Spectrum Disorder (ASD) in the CHARGE Study.** W. Sanderson, University of Kentucky, Lexington, KY.
- **Incidence of Birth Defects Among Infants with Exposure to Environmental Pollution in Naples.** C. Rennix, Navy and Marine Corps Public Health Center, Portsmouth, VA.
- **A Thai Birth Cohort with Mothers Exposed to Agricultural Pesticides.** P. Ryan, Emory University, Atlanta, GA.
- **Effects of Work in Non-Traditional Trades on Birth Weight in the WHAT-ME Study.** N. Cherry, University of Alberta, Edmonton, AB, Canada.

RT 230

Medical Marijuana in the Workplace

10:00 a.m.-Noon | Palais, 510b

Arranger/Monitor: S. Barnett Bucherl, pH2, LLC, Avon, IN. **Moderator:** K. Serrano, National Jewish Health, Denver, CO. **Monitor:** J. Snawder, NIOSH, Cincinnati, OH.

Medical marijuana laws have been passed in multiple states and are now in direct conflict with federal law. What do you do when an employee tests positive for THC? How do you comply with competing laws and maintain a safe working environment?

- **Working Under the Influence: Medical Marijuana in the Workplace.** P. Greaney, WorkCare Inc., Anaheim, CA.
- **Legal Aspects of Medical Marijuana in the Workplace.** P. Lowe, Brann & Isaacson, Lewiston, ME.
- **State Laws and Medical Marijuana in the Workplace.** B. Current, WFC & Associates, LLC, Coral Springs, FL.
- **Medical Marijuana — Is It Business As Usual?** J. Gifford, A.G. Wassenaar, Inc., Denver, CO.

RT 231

OELs as a Hierarchy of Tools: Lessons in Global Use and Interpretation

10:00 a.m.-Noon | Palais, 710b

Arranger: J. Perkins, UTHSC, San Antonio, TX. **Moderator:** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA. **Monitors:** M. Sullivan, California State University, Northridge, CA; S. Derman, Medishare Environmental Health & Safety Services, Santa Clara, CA.

Whereas Roundtable #1 “Global Exposure Limit Setting Processes—Harmonization on an OEL Hierarchy Approach” provided the big picture view of the changing landscape surrounding exposure limits, this session was designed to explore in some depth the lessons learned in the global use and interpretation of OELs as a hierarchy of tools. This roundtable will also be integrated with audience participation segments with a desired outcome of a “path forward and future action items” for the profession.

- **Welcome and Introductions.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.
- **Understanding the Suite of Tools: Strengths, Limitations, Additional Guidance and Membership Survey Poll.** J. Mulhausen, 3M, St. Paul, MN.
- **Occupational Exposure Bands: A Tool for Setting OELs for Chemicals with Limited Data.** D. Heidel, Bureau Veritas North America, Inc., Edison, NJ.
- **Development and Implementation of Health-Based OELs.** A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH.
- **Implementation of the Hierarchy Approach: The Shell Oil Experience.** K. Niven, Shell International, The Hague, Netherlands.

- **Implementation of the Hierarchy Approach: The Dow Chemical Experience.** S. Ripple, Dow Chemical Company, Midland, MI.
- **Review of Audience Poll.** J. Mulhausen, 3M, St. Paul, MN.
- **Q&A and Closing Remarks.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.

NEW!

The UnSession

An innovative way to connect, share, explore and brainstorm solutions to everyday challenges.

10:00 a.m.-Noon | Palais, 520c

Facilitator: C. Hovde, Caterpillar, Kiel, Germany
Monitor: C. Elish, Bell Helicopter, Euless, TX

UnSessions originated in the high-tech industry. Not for those who like a more passive learning experience with a traditional lecture approach, *UnSessions* are designed to create the intimacy and free flow of ideas that traditional sessions frequently leave wanting. They are flexible, spontaneous, and participant driven:

- Participants build the session agenda on site with the assistance of a facilitator
- Anyone interested in solving a problem has the opportunity to tackle it with others
- A variety of formats can be used in the *UnSession* once the content is decided

Members of the Student Early Career Professionals and Career & Employment Services Volunteer Groups are sponsoring AIHce's first *UnSession*. Issues and concerns of importance to these groups and their constituencies will be covered, including selling your ideas/yourself at work to various audiences, dealing with difficult ethical challenges, and handling challenging situations confronting you in your first few years as an IH professional.

Participants are often amazed that concrete solutions arise to difficult problems, and at the same time, community and commitments are forged!

Be daring — give it a try!
All are welcome!

PO 130

Computer Applications

10:00 a.m.-12:30 p.m. | Palais, 511b

Arranger: T. Carraway, U.S. Department of State, Washington, DC. **Moderator:** M. Melkonian, Medgate, Inc., Toronto, ON, Canada. **Monitors:** M. Bergner, St Paul, MN; L. Bridges, KBR, Houston, TX.

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

CS-130-01 Asbestos, GIS, and the Management Plan. R. Horsch, NIH, Bethesda, MD.

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

CS-130-02 Using Google Analytics to Evaluate Use of a Web-Accessible Database of Construc-

tion Hazard Controls. J. Le, J. Platner, The Center for Construction Research and Training, Silver Spring, MD; C. Knack, Conceptual Arts, Gainesville, FL.

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

CS-130-03 Electrical Work Practices (EWP) Multi-Site Compliance Tracking Tool. J. Yasalonis, A. Sheaffer, LMI, Belcamp, MD.

11:30 a.m.-Noon

SR-130-04 A Computer Tool for the Assessment of Potential Combined Acute Effects of Chemicals in Mixtures. J. Côté, F. Lemay, A. Vyskocil, M. Baril, N. El Majidi, F. Gagnon, C. Viau, University of Montréal, Montréal, QC, Canada; D. Drolet, IRSST, Montréal, QC, Canada.

Noon-12:30 p.m.

CS-130-05 A Method for Preparing an Exposure Database (MESU) for Retrospective Exposure Assessments of Disease Compensation Claims. D. Chung, WSIB, Toronto, ON, Canada.

RT 232

Stretching: the Truth

10:00 a.m.-12:30 p.m. | Palais, 511c

Arranger/Moderator: M. O'Reilly, ARLS Consultants, Inc., Manlius, NY. **Monitors:** J. Haney, ARLS Consultants, Inc., Manlius, NY; R. Deist, Accellent, Inc., Wilmington, MA.

Stretching in the workplace has been a topic of discussion for decades. No one doubts the physiological benefit of stretching and physical fitness, but the crucial question is the relationship between stretching and effective ergonomic interventions in the workplace. The answer to that question is not clear for many reasons including imprecise use of terminology, lack of specific and controlled scientific data, the complexity of the human worker and human organizations, different areas of the body that are evaluated, and the Hawthorne or placebo effect. This roundtable is crafted to present an interactive discussion of these topics in a talk show format. Each presenter will have seven minutes to explain their point of view without interruption. The moderator will then lead a discussion among the presenters and audience focusing on the relationships among stretching, musculoskeletal injury, productivity, and worker well-being, cost-effectiveness, and total physical fitness. The stretching break for this session is audience participation in the traditional Mask Dance currently used in Korean industries. Please plan to come for the whole session!

- **Cost of Stretching.** B. McGowan, CPE, Humantech, Inc., Ann Arbor, MI.
- **Stretching: the Perspective of a Practicing Occupational Physician.** R. Donze, The Chester County Hospital and Health System, West Chester, PA.
- **Where Do the Benefits Exist?** M. Werrell, ERGO-WORKS Consulting, LLC, Gaithersburg, MD.
- **Stretching and Musculoskeletal Injury Pathways.** S. Gallagher, Auburn University, Auburn, AL.

- **Stretching in Construction: A Labor Perspective.** S. Schneider, Laborers' Health and Safety Fund of North America, Washington, DC.
- **Case Study: Korean Traditional Mask Dance (KTMD) for Eliminating MSDs in the Cosmetic Industry.** S. Ham, Seoul National University, Seoul, Republic of Korea.
- **Is Stretching Substituting for Ergonomics?** J. Hess, Labor Education and Research Center, Eugene, OR.

CR 312

Protecting Truck Drivers at Your Facility — and Off

11:30 a.m.-12:30 p.m. | Palais, 520b

Presenter: C. Kimmel, Arizona Chemical, Jacksonville, FL.

The presentation will include the general review of risk potential associated with bulk loading and unloading of liquids at a global chemical manufacturing facility. It will also address the common elements that should be included in a contractor and carrier safety program. Solutions will be shared that include fall protection, loading/unloading practices, accountability, and others. Some discussion also about influencing carriers beyond your fence line.

Donald E. Cummings Award Lecture**Now We Are 75, What Have We Learned About Protecting Worker Health?**

12:30 p.m.-1:30 p.m. | Palais, 510b

**Presenter:** Lindsay E. Booher, CIH, CSP

As Industrial Hygienists, we face unprecedented challenges and opportunities. In his 1954 Cummings Lecture, Frank Patty, at the time the Head of GM's Industrial Hygiene Department, recapped AIHA's and the

profession's progress 15 years after the formation of AIHA in 1939. In his address, Frank described the Association and profession as approaching maturity in the recognition, evaluation and control of the causes and sources of illnesses in industry.

As we approach our 75th anniversary in 2014, this Cummings Lecture will take stock of where we are as we approach 75. I will come at this from the perspective of an Industrial Hygienist who started as a young Naval Officer, then moved to an industry rich with Industrial Hygiene tradition and challenges. I'll recap several experiences along the way that shaped my personal perceptions and professional practice and that color my outlook for the future. Finally, I will reflect a moment on the challenge Frank Mirer

left with us just last year when he challenged us to give voice to workers who can't speak for themselves about hazards they face every day.

Luncheon Discussions**EV 07 SOLD OUT****Oil and Gas Extraction: Differentiating Health Hazards from Media Hype**

12:30 p.m.-2:00 p.m. | Palais, 512a

Moderators: M. Botham, Cenovus Energy Inc., Calgary, AB, Canada; E.B. Tobias, Syncrude Canada Ltd., Fort McMurray, AB, Canada

EV 08 SOLD OUT**Exposure Assessment Strategies: Are You Hitting the Bull's Eye?**

12:30 p.m.-2:00 p.m. | Palais, 512e

Moderators: S. Arnold, EH&S, LLC, Roswell, GA; S. Jahn, SRS, Aiken, SC

PO 134

Indoor Environmental Quality I

1:00 p.m.-4:30 p.m. | Palais, 514

Arranger: J. Hicks, Exponent, Inc., Oakland, CA.

Moderator: W. Kerbel, Environmental Health Investigations, Sparta, NJ. **Monitors:** T. Lucas, InAIR Environmental Inc., Ottawa, ON, Canada; N. Zimmerman, Purdue University, West Lafayette, IN.

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

CS-134-08 The Use of Polymerase Chain Reaction (PCR) to Detect Sewage Contamination After Hurricanes, Flooding, and Sewer Overflows in Indoor Environments and Soil. D. Miskowski, EMSL Analytical Inc., Cinnaminson, NJ.

1:30 p.m.-2:00 p.m.

CS-134-02 Vapor Intrusion Issues at an Industrial Site. L. Breyer, Bureau Veritas North America, Inc., Lakewood, CO.

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

CS-134-03 Case Study: Occupational Cat/Dog Allergen Assessment Related to Pets in the Workplace. J. Karner, Procter & Gamble, Mason, OH.

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

SR-134-04 New Methods of Sampling and Analysis of Formaldehyde. R. Freeman, A. Delia, M. Spartz, Prism Analytical Technologies Inc., Mount Pleasant, MI.

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

CS-134-05 Significance of a *Legionella* Testing Outbreak. D. Summerbell, D. Scott, University of Toronto, Toronto, ON, Canada.

3:30 p.m.-4:00 p.m.

SR-134-06 Assessing the Effect of Household Activities on Indoor Fungal Aerosols. H. Burge, EMLab P&K, Novato, CA; M. Seidl, EMLab P&K, Seattle, WA.

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

SR-134-07 Penetration of Outdoor Fungal Aerosols into the Indoor Environment. H. Burge, EMLab P&K, Novato, CA; A. Jalsrai, EMLab P&K, Cherry Hill, NJ; M. Seidl, EMLab P&K, Seattle, WA.

WITHDRAWN: SR-134-01 Assessing Building Occupant Indoor Air Quality Expectations Compared to Nationally Recognized Standards. S. Lemessa, Bureau Veritas North America, Houston, TX.

PO 132

Real-Time Detection

1:00 p.m.-4:30 p.m. | Palais, 516d

Arranger: P. Smith, OSHA, Sandy, UT. **Moderator:** W. Mills, Mills Consulting Inc., Oak Park, IL. **Monitors:** B. Fraser, Canadian Department of Health, Ottawa, ON, Canada; S. Barnes, Chevron, Bakersfield, CA.

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

SR-132-08 A Direct-Reading Exposure Assessment Method Using a Real-Time Location System (RTLS) and Wireless Personal Chemical Sensor. K. Brown, K. Mead, P. Shaw, R. Kovein, NIOSH, Cincinnati, OH; R. Voorhees, University of Cincinnati, Cincinnati, OH; A. Brandes, MeasureNet Technology, LLC, Cincinnati, OH.

1:30 p.m.-2:00 p.m.

SR-132-02 Whole-Air Analysis Using Field-Portable Gas Chromatography. P. Smith, OSHA, Sandy, UT.

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

CS-132-03 Comparison of Side-by-Side Particulate Sampling Using a Size-Selective Real-Time Aerosol Monitor and a Filter Cassette Using Gravitimetric Analysis. M. Baquiran, J. Lang, M. Finn, ENVIRON International Corporation, Chicago, IL.

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

SR-132-04 Evaluation of the Continuous Personal Dust Monitors in the Context of MSHA's Proposed Rule for Lowering Exposure to Respirable Coal Mine Dust. M. Cooper, Exponent, Menlo Park, CA; S. McCarthy, Exponent, Oakland, CA.

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

CS-132-05 Accurately Measuring Nanoparticles in the Field. T. Grillo, Kanomax USA, Inc., Andover, NJ.

3:30 p.m.-4:00 p.m.

SR-132-06 PhotoThermal Desorption of Toluene from Single-Walled Carbon Nanotube and Activated Carbon Sorbents. E. Floyd, C. Lungu, University of Alabama at Birmingham, Birmingham, AL.

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

SR-132-07 A Comparison of Benzene Detectors for Use by Refinery Operations. T. Jackson, Phillips 66, Oklahoma City, OK.

WITHDRAWN

CS-132-01 Response to Unexpected Presence of VOCs in an Underground Nuclear Repository. J. Doherty, Nuclear Waste Partnership, Carlsbad, NM.

PO 131

Industrial Hygiene General Practice

1:00 p.m.-5:00 p.m. | Palais, 513d

Arranger/Moderator/Monitor: D. Day, Sealed Air Corporation, Duncan, SC.

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

CS-131-01 Reducing Iodine Exposure at Disinfectant Manufacturing Company in India.

A. Kulkarni, ISS (India) Consultancy Services Pvt. Ltd., Vadodara, India; M. Mehta, T. Mehta, G. Desai, International Safety Systems, Inc., Washingtonville, NY.

1:30 p.m.-2:00 p.m.

CS-131-02 Controlling Cadmium Exposures at an Electric Arc Furnace.

S. Crawford, DirectCIH, Birmingham, AL; C. Fitzgerald, J. Oh, University of Alabama at Birmingham, Birmingham, AL.

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

SR-131-03 Inhalation Exposure to Food Flavorings at a Manufacturing Facility.

C. Ronk, D. Hollins, A. Foda, R. Ward, M. Jacobsen, D. Paustenbach, ChemRisk, San Francisco, CA.

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

SR-131-04 Peak and Frequency Inhalation Flow Impact on NP Penetration Through N95 Filters.

A. Mahdavi, A. Bahloul, C. Ostiguy, IRSST, Montréal, QC, Canada; F. Haghighat, Concordia University, Montréal, QC, Canada.

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

CS-131-05 Particle Statistics Applied to Filter Penetration When Challenged with Nanoparticles.

P. O'Shaughnessy, University of Iowa, Iowa City, IA.

3:30 p.m.-4:00 p.m.

SR-131-06 Pressure Drop, Capture Efficiency, and Dust Loading Capacity of Custom Fabricated High-Efficiency Particulate Air (HEPA) Filters Before and After Being Cleaned and Reused.

K. Smigielski, First Solar Inc., Perrysburg, OH; F. Akbar-Khanzadeh, University of Toledo, Toledo, OH.

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

SR-131-07 Descriptive Analysis of Industrial Hygiene Air Sampling Data Stored in OSHA's Integrated Management Information System Databank.

P. Sarazin, J. Lavoué, Université de Montréal, Montréal, QC, Canada; L. Kincl, Oregon State University, Corvallis, OR; I. Burstyn, Drexel University, Philadelphia, PA.

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

SR-131-08 Fiber Escape from Asbestos Abatement Enclosures — Quantitative Results.

P. Bozek, A. Sass-Kortsak, University of Toronto, Toronto, ON, Canada.

RT 233

Conformity Assessment for Personal Protective Equipment

1:00 p.m.-5:00 p.m. | Palais, 710b

Arranger/Moderator: R. Metzler, NIOSH, Pittsburgh, PA. **Monitors:** J. Parker, National Personal Protective Technology Laboratory, Pittsburgh, PA; J. Johnson, JSJ and Associates, Pleasanton, CA.

The level of protection required by a type of personal protective equipment (PPE) can vary greatly among occupations and work tasks. When users purchase PPE, they expect it to provide protection during use, and they expect the PPE to conform to the standards it claims to meet. Conformity assessment is the general name for a group of activities used to provide confidence that products comply with requirements or standards. Typical conformity assessment activities include certification, inspection, and testing. To ensure protection is provided as represented by the PPE type and applicable standards, adequate conformity assessment activities, including certification, are required. This roundtable discusses conformity assessment activities for PPE. It describes why these activities are important from the perspectives of government, standards developers, industry, PPE manufacturers, and labor.

- **An Overview of Conformity Assessment.** L. Carnahan, National Institute of Standards and Technology, Gaithersburg, MD.
- **NIOSH Personal Protective Technology Conformity Assessment Working Group — A National Strategy.** J. Szalajda, NIOSH, Pittsburgh, PA.
- **Risk and Conformity Assessment Standards.** B. Beamer, University of Wisconsin-Stout, Menomonie, WI.
- **Certification of Personal Protective Equipment (PPE) Through Use of Product Performance and Conformity Assessment Standards.** P. Gleason, Safety Equipment Institute, McLean, VA.
- **International Safety Equipment Association (ISEA) PPE Conformity Assessment Standard.** C. Fargo, International Safety Equipment Association, Arlington, VA.
- **Conformance to PPE Performance Standards: A Global Manufacturer's Viewpoint.** R. Weber, 3M, St. Paul, MN.
- **PPE User's (Industry) Perspective on Why PPE Conformity Assessment Standards Form a Part of an Overall Protective Strategy.** J. Rodriguez, Raytheon Technical Services Company LLC, Dulles, VA.

• PPE Users (Labor) Perspective on the Value of PPE Conformity Assessment Standards.

J. Platner, The Center for Construction Research and Training, Silver Spring, MD.

RT 235

Industrial Hygiene in Mining

1:00 p.m.-5:00 p.m. | Palais, 511a

Arranger: C. Balcaen, AMEC Environment and Infrastructure, Burnaby, BC, Canada. **Moderator:** H. Beaulieu, Industrial Hygiene Resources, Boise, ID. **Monitors:** N. Taherdin, J. Law, BHP Billiton, Yellowknife, NT, Canada.

Mining environments present a variety of industrial hygiene challenges that are evidenced by occupational disease statistics in the mining industry. Industrial hygiene has generally been underrepresented in the mining industry for various reasons. This roundtable will provide an overview of some of the topical Industrial Hygiene issues in mining and also examine some strategies that Industrial Hygienists are implementing to address traditional — and non-traditional industrial hygiene issues in mining.

- **Status Report on the Occupational Health of U.S. Miners.** T. Hethmon, University of Utah, Salt Lake City, UT.
- **Monitoring and Control Products Developed by NIOSH Office of Mine Safety and Health Research.** G. Joy, NIOSH, Pittsburgh, PA.
- **Crystalline Silica Exposures in Alberta Mining and Mineral Extraction.** D. Radnoff, Workplace Standards, Alberta Human Services, Edmonton, AB, Canada.
- **Preventing Fatigue-Related Incidents in the Australian Mining Industry.** P. Byrne, Fatigue Science, Vancouver, BC, Canada.
- **Health Hazards of Refining of Gold, Silver, and Other Precious Metals.** M. Call, Industrial Hygiene Resources, Boise, ID.
- **The Mine Safety and Health Administration and the Regulatory Process.** R. Richards, Department of Labor, Arlington, VA.
- **Applying Industrial Hygiene in a Multinational Mining Company.** K. Jessep, Rio Tinto HSEC, Montréal, QC, Canada.



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

SS 003

Exposure Risk Management: Bridging Gaps Between Manufacturing and Product Safety

1:00 p.m.-5:00 p.m. | Palais, 710a

Arranger: P. Harper, ENVIRON International Corp, Phoenix, AZ. **Moderator:** K. Murphy, Honeywell International, Tempe, AZ. **Monitors:** J. Persky, R. Jones, ENVIRON International Corp, Chicago, IL.

Continuing expansion of material and product applications and regulatory requirements for those materials and applications create a tension between exposure assessment and management for materials found in end products and in the manufacturing environment. This roundtable will explore emerging concepts and tools in exposure assessment and management from both the manufacturing and product points of view, challenges of reconciling information between the two forums, and provide considerations for reconciling and managing exposure risks. The first half of the roundtable will examine emerging requirements and models for materials management in the Manufacturing Environment. The second half of the roundtable will examine exposure management issues in the product environment. Finally, the speakers will convene a roundtable discussion on potential models for reconciling and harmonizing exposure management paradigms in both environments.

- **The Increasing Tension Between Product Safety and the Manufacturing Environment: An Overview of the Landscape and Challenges to Manufacturers.** P. Harper, ENVIRON International Corp, Phoenix, AZ.
- **A Model to Manage Exposure Risk in the Manufacturing Environment.** C. Torres, ENVIRON International Corp, Atlanta, GA.
- **Integrating Chemical Risk Data into OEL Determination.** B. Adams, ENVIRON International Corp, Little Rock, AR.
- **Impact of GHS and Global Regulations on Exposure Management in the Manufacturing Environment.** L. Dell, ENVIRON International Corp, Amherst, MA.
- **Product Safety Throughout the Supply Chain.** G. Thompson, ENVIRON International Corp, Phoenix, AZ.
- **REACH Exposure Scenarios – A Tool for Exposure Management in the Supply Chain.** R. Skoglund, 3M, St. Paul, MN.
- **The New ACC Product Safety Code of Management Practices: An Overview and a Challenge.** A. Jones, Honeywell International, Washington, DC.
- **Risk Communication: Harnessing Synergies Between Product Stewards, Regulatory Affairs, and Industrial Hygiene Groups.** H. Duijts, AkzoNobel, Strongsville, OH.
- **Reconciling Exposure Risks: A Panel Discussion.** C. Albaugh, AkzoNobel, Strongsville, OH.

CR 313

Measuring Implementation of Your H&S Management System

1:30 p.m.-2:30 p.m. | Palais, 513a

Presenters: B. Russell, Systems Approach, LLC, West Simsbury, CT; T. Rancour, Rancour & Associates, Northville, MI.

This is a follow-up on discussion to last year's presentation on Assessing the Effectiveness of Your Safety & Health Program. We will discuss the various methods by which findings from an S&H assessment can be presented, with emphasis on converting text-based findings into a numerical rating. We will discuss how numerical ratings can be used as a leading indicator by virtue of the ability to assess processes and not just outcomes. The concept of a Sustainability Index will be suggested.

CR 314

Emergency Response: The 3 C's for Managing Safety and Environmental Issues During a Spill Event

1:30 p.m.-2:30 p.m. | Palais, 516a

Presenters: C. Deskins, B. Keller, Architect of the Capitol, Washington, DC.

The 3 C's: communication, collaboration, and coordination are essential during the response and cleanup of a spill to ensure the health and safety of employees and contractors, the protection of the environment, and timely regulatory reporting. Lessons learned from a mercury spill from a closed-loop refrigerant system during a power plant demolition, and the subsequent cleanup will be presented with emphasis on the importance of the 3 C's.

PO 135

Physical Stress and Emergent Care Issues During Work/Responses

1:30 p.m.-4:00 p.m. | Palais, 515

Arrangers: J. Hill, Alameda, CA; S. Rabinovitz, Sandler Occupational Medicine Associates, Inc., Gaithersburg, MD. **Moderator:** J. Cocciardi, HHS, Washington, DC. **Monitors:** S. Danielczyk, Homeland Defense Security Agency, Washington, DC.; E. Primeau.

1:30 p.m.-2:00 p.m.

CS-135-01 Medial Alternate Care Facilities: How one Community Prepares for Disasters. J. Nitchals, Nebraska Orthopaedic Hospital, Omaha, NE; J. O'Connor, Boys Town National Research Hospital, Omaha, NE.

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

CS-135-02 Mass Patient Decontamination Guidance Against Chemical Threats. J. Ignacio, U.S. Public Health Service, Washington, DC.

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

WITHDRAWN: CS-135-03 If You Can't Stand the Heat! C. Brudecki, Navarro Research and Engineering, Oak Ridge, TN; S. Blackburn, Street Legal Industries, Oak Ridge, TN.

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

SR-135-04 Heat Stress and Strain Monitoring for Electric Utility Workers. E. Brown, University of California Los Angeles, Los Angeles, CA.

3:30 p.m.-4:00 p.m.

CS-135-05 Occupational Law Enforcement Case Study of a Mexican Migrant Farmworker Gone Missing During a Heat Wave. J. Nevarez, OSHA, Arlington Heights, IL.

PO 136

Construction

1:30 p.m.-4:30 p.m. | Palais, 511b

Arranger: J. Keyes, CHESSE, Inc., Woodbury, MN. **Moderator:** M. Soltis, Pittsburgh, PA. **Monitors:** G. Mellor, Omega Environmental Services, Inc., Hackensack, NJ; G. Beswick, AECOM Technology Corporation, Coraopolis.

1:30 p.m.-2:00 p.m.

SR-136-01 Exposure to Crystalline Silica During Various Floor Burnishing Processes. R. Rottersman, J. Lang, ENVIRON International Corp., Chicago, IL; F. Heitfeld, Sealed Air, Sturtevant, WI.

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

CS-136-02 Managing PCBs in Caulk During a Building Renovation. A. Sheaffer, J. Yasalonis, LMI, Belcamp, MD.

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

CS-136-03 Carbon Monoxide from Diesel Engines at a Construction Site. F. Boelter, ENVIRON, Chicago, IL.

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

SR-136-04 Welding Exposures in Construction – 30 Years of OSHA Data. M. Flynn, University of North Carolina, Chapel Hill, NC; P. Susi, Center for Construction Research and Training, Silver Spring, MD.

3:30 p.m.-4:00 p.m.

CS-136-05 Construction Site Safety – NYC Framework as a Model. J. Ellis, ENVIRON International Corp., Princeton, NJ.

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

CS-136-06 Leading Indicators that Work – How to Really Improve Contractor Health Performance. A. Nowosiwsky, N. Burke, D. Hancock, S. Harmen, ExxonMobil Corporation, Port Moresby, Papua New Guinea.

RT 236

Perspectives on Preparing for the CIH Exam v7.0

1:30 p.m.-4:30 p.m. | Palais, 511c

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

Moderator: A. Fleeger, ExxonMobil Chemical Company, Houston, TX. **Monitors:** J. Gifford, Genesis Energy, L.P., Houston, TX; K. Merritt, SQA2, Inc., Hampton, VA.

For industrial hygienists, 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.
- **My Application Has Been Accepted...Now What?** M. Le, Chemrisk, San Francisco, CA.
- **Preparing for the CIH When Life Happens.** S. Paradis, 3M, St. Paul, MN.
- **Putting the Elements Together to Pass the Exam.** C. Ficklen, SQA2, Inc., Hampton, VA.
- **Creating a Supportive Environment for Obtaining your CIH, Are You in One? Should You Be?** B. Geyer, NASA, Kennedy Space Center, FL.

PO 133

Sampling and Analysis: Trends in Exposure Assessments I

1:30 p.m.-5:00 p.m. | Palais, 520a

Arranger: D. Pastuf, Galson Laboratories, East Syracuse, NY. **Moderator:** A. Iske, University of Central Missouri, Kansas City, MO. **Monitors:** J. Cooper, Novi, MI; R. O'Mara, Eli Lilly and Company, Lafayette, IN.

WITHDRAWN: SR-133-01 Experimental Study for Wood Dust Measurement Applied to Hand-Held Sanders. F. Keller, INRS, Vandoeuvre les Nancy, France.

1:30 p.m.-2:00 p.m.

SR-133-02. Using Hand Wipes to Evaluate Flight Crew Exposure to Flame Retardants on Airplanes. J. Allen, J. Vallarino, E. McNeely, J. Spengler, Harvard University, Boston, MA; H. Stapleton, Duke University, Durham, NC; M. McClean, Boston University, Boston, MA; S. Harrad, C. Rauert, University of Birmingham, Birmingham, United Kingdom.

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

CS-133-03 Exposure Assessment and Controls at Carbon Black Manufacturing Sites in China. L. Chenggang, X. Jing, International Safety Systems, Inc., Shanghai, China; M. Toral, M. Maharshi, International Safety Systems, Inc., New York, NY.

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

CS-133-04 Verification of Paint Used in Construction of an Offshore Production Unit. H. Smedbold, Proactima/NTNU, Stavanger, Norway.

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

CS-133-05 The Analysis of Combustion Byproducts in Fire Investigations (Char, Soot, and Ash). E. Mirica, EMSL Analytical, Cinnaminson, NJ.

3:30 p.m.-4:00 p.m.

SR-133-06 Validity and Reliability of Elemental Sulfur and Strontium for Identification of Problematic Drywall. D. MacIntosh, J. Allen, B. Baker, T. Minegishi, T. Myatt, J. Stewart, J. McCarthy, Environmental Health & Engineering, Inc., Needham, MA.

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

SR-133-07 Determinations of Triclosan, 1,4-Dioxane and Synthetic Musks in Water Simultaneously by Solid-Phase Microextraction. H. Lin, S. Tsai, National Taiwan University, Taipei, Taiwan.

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

SR-133-08 Sampling and Resuspension of the Fugitive Dust Along River Banks in Taiwan. C. Lai, H. Lin, K. Lai, J. Chen, Chung Shan Medical University, Taichung, Taiwan; W. Lin, National Taipei University of Technology, Taipei, Taiwan; Y. Kao, Bureau of Environmental Protection, Changhua County, Taiwan.

PO 137

Safety

1:30 p.m.-5:00 p.m. | Palais, 520b

Arranger/Moderator: N. Orr, Becton Dickinson and Co., Franklin Lakes, NJ. **Monitors:** C. Dellacqua, Amgen, Thousand Oaks, CA; M. Jones, Department of Veterans Affairs, Iowa City, IA.

1:30 p.m.-2:00 p.m.

SR-137-01 "Explosibility Index" – Extension to Dust Explosion Protection. R. Prugh, Chilworth Technology, Inc., Princeton, NJ.

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

CS-137-02 Process Safety Management – How a Different Approach to Mechanical Integrity Changed Everything. W. Beadie, Maul Foster & Alongi, Inc., Portland, OR.

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

CS-137-03 Making Quantum Improvement in Safety Performance with Fewer Safety Resources. M. Dunwoody, Simply Smart Safety, Simpsonville, SC.

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

CS-137-04 Developing and Maintaining a Safety Culture in a Transient Work Force. M. Hanna, S&ME, Inc., Richmond, VA; F. Alston, URS, Oak Ridge, TN.

3:30 p.m.-4:00 p.m.

WITHDRAWN: S-137-05 Empowering Employees: Applying Lean Manufacturing Principles to Improve Overall Safety Culture. A. Steiner, Caterpillar, Inc., Prentice, WI.

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

SR-137-06 Oregon Commercial Crab Fishing Safety Assessment. G. Croteau, M. Cohen, J. Camp, University of Washington, Seattle, WA; E. Zoller, Oregon Health and Sciences University, Portland, OR; J. Lincoln, NIOSH, Anchorage, AK.

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

SR-137-07 Reduction in Hexavalent Chromium Exposure During Stainless Steel Welding at an Engineering Industry. A. Choudhry, International Safety Systems, Inc., Washingtonville, NY.

RT 237

Gender and Sex and Occupational Health

1:30 p.m.-5:00 p.m. | Palais, 510a

Arranger: K. Messing, Université du Québec à Montréal – CINBIOSE, Montréal, QC, Canada. **Moderator:** M. Baldwin, Concordia University, Westmount, QC, Canada. **Monitors:** S. Schneider, Laborers' Health and Safety Fund of North America, Washington, DC.; C. Becnel, DM Petroleum, New Orleans, LA.

Men and women are distributed differently across employment sectors and occupations. Even within the same occupations, their assigned work and real work activity may be very different. The two sexes have different average physiological and anthropometric characteristics. Therefore, the same name of a risk factor (e.g., lifting heavy weights) will not necessarily refer to the same health and safety risk for women as for men. The session will discuss the consequences of sex and gender differences for prevention of occupational health problems.

- **Why Discuss Gender and Sex in Relation to Industrial Hygiene.** K. Messing, Université du Québec à Montréal - CINBIOSE, Montréal, QC, Canada.
- **Should Job Exposure Matrices be Sex Differentiated?** J. Lavoué, Université du Québec à Montréal, Montréal, QC, Canada; F. Labrèche, Institut de recherche Robert-Sauvé en santé et en sécurité du travail, Montréal, QC, Canada.
- **Neurotoxic Exposures and Effects: Gender and Sex Matter.** D. Mergler, Université du Québec à Montréal – CINBIOSE, Montréal, QC, Canada.
- **What the 2007-2008 Quebec Survey of Working and Employment Conditions and Occupational Health and Safety Tells Us About Gender Differences in Work-Related Musculoskeletal Disorders and Related Exposures.** S. Stock, Quebec Institute of Public Health, Montréal, QC, Canada.
- **Indicators of Exposure and Health Impacts Among Female and Male Seasonal Workers.** M. Major, Université de Sherbrooke, Sherbrooke, QC, Canada.

- **Serious Pain Related to Static Work among Female and Male Dentists.** R. Proteau, Association pour la santé et la sécurité du travail du Secteur des affaires sociales, Montréal, QC, Canada.
- **Comparison Between Male and Female Workers During Repeated Lifting Tasks.** A. Plamondon, Institut de Recherche Robert-Sauvé en santé et en sécurité du travail, Montréal, QC, Canada.

CR 315

Prescription Drugs in the Workplace: An Employer's Guide for Screening and Prevention

3:00 p.m.-4:00 p.m. | Palais, 516a

Presenter: P. Greaney, WorkCare, Inc., Anaheim, CA.

The vast majority of drug users are employed, and when they arrive for work, they don't leave their addiction at the door. If your drug and alcohol program is behind the times, you may be putting your work force at risk. Presented by an occupational health care physician and a forensic laboratory doctor, this talk will provide employers with insight into the latest street drugs, facts about commonly abused prescription meds, and a guide for prevention and effective drug screening.

CR 316

Challenging the Incident Investigation Paradigm

3:00 p.m.-4:00 p.m. | Palais, 513a

Presenter: T. Ward, BST, Ojai, CA.

What? A recordable injury from someone who hit their thumb with a hammer! I want a full blown investigation, and I want to know how we are going to prevent this from happening again! Can this reaction be the right approach? This talk is designed to explore whether it is time to explode our ideas/approach to the incident investigation process. The presenter will outline a model for a more time efficient approach to incident reporting and investigation.

RT 238

Getting Out of the Box — Innovative Approaches to Hearing Conservation

5:00 P.M.-8:00 p.m. | Palais, 515

Arranger: J. Banach, 3M, Oconomowoc, WI.

Moderator: T. Madison, 3M, St. Paul, MN. Monitors: C. Achutan, University of Nebraska Medical Center, Omaha, NE; J. Kunz, 3M, St. Paul, MN.

The first attempts at hearing conservation are rooted long before regulation when the first human stuck their fingers in their ears to avoid the discomfort of an auditory signal. Thanks to a variety of regulations and

standards there are many more tools that are applied to try to minimize or, ideally, eliminate noise-induced hearing loss. Increasingly, hearing conservationists are realizing that the "typical" tools — exposure measurement, protection, audiological evaluation, training, and recordkeeping — are not enough. Noise control, fit validation, management and employee engagement, and metrics analysis are being found to be necessary approaches. Analysis, attitude shifts, leadership, and creative solutions are a must. Many programs have relied on Standard Threshold Shift (STS) occurrences as the indicator of effectiveness. In reality this is not a predictor but a lagging indicator that verifies a program failure. Some are striving to go from wondering if the program will be effective to knowing exposures are under control, and they share their experiences and insights.

- **Perspectives on Hearing Conservation: A Look Back and Current Actions in 15 Companies.** J. Banach, 3M, Oconomowoc, WI.
- **Three Critical Elements in Your Strategy for Reducing Noise-Induced Hearing Loss.** P. Logan, 3M, St. Paul, MN.
- **Moving Beyond STS Tracking to Meaningful Hearing Conservation: The Johns Manville Road Map.** B. Menard, Johns Manville, Denver, CO.
- **Hearing Conservation with a Bit of Magic.** L. Welch, Walt Disney World, Lake Buena Vista, FL.
- **Innovative Approaches in Noise Control — Servo Drives and Programmable Logic Controls for Motivating and Operating Machinery.** D. Driscoll, Associates in Acoustics, Evergreen, CO.

CR 317

NFPA 70E Electrical Safety Standard in the Workplace (2012 Edition). One Year Later: Progress on Revised Standard Implementation

5:30 p.m.-6:30 p.m. | Palais, 513a

Presenter: P. Zoubek, Zoubek Consulting, LLC, San Diego, CA.

NFPA 70E (Standard for Electrical Safety in the Workplace) is a global consensus that provides guidance on worker safety from shock/arc flash hazards. In late 2011, NFPA released the 2012 Edition of NFPA 70E. The 2012 standard included revisions to hazard risk category tables, new PPE requirements, frequency requirements for electrical safety program auditing and training, and revisions to electrical safety program content requirements. Outlined is progress and case studies regarding implementation of standard revisions since released.

PO 138

Health Care III: Ergonomics, Compressed Gases, Lasers, and Heavy Metal Exposures Issues

5:30 p.m.-8:00 p.m. | Palais, 513d

Arranger/Monitor: M. Jones, Department of Veterans Affairs, Iowa City, IA. Moderator: V. Puhlovich, Kaiser Permanente, Pasadena, CA. Monitor: M. McCullough, Dana-Farber Cancer Institute, Boston, MA.

5:30 p.m.-6:00 p.m.

SR-138-01 Documenting the Amount of Manual Handling Performed by Nurses in a Hospital Setting. T. Poole-Wilson, K. Davis, N. Daraiseh, University of Cincinnati, Cincinnati, OH.

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

CS-138-02 A Value Strategy Safe Patient Handling Case Study. C. Brigham, 1Source Safety and Health, Inc., Exton, PA.

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

CS-138-03 Using the HACCP Risk Analysis Model for Compressed Gases Management at a Health Care Facility. D. Krageschmidt, Mayo Clinic, Rochester, MN.

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

SR-138-04 Determination of Emission Rate of Medical Laser-Generated Air Contaminants in a Simulated Surgical Procedure. J. Lippert, R. Lopez, N. Esmen, L. Conroy, J. Franke, University of Illinois—Chicago, Chicago, IL; J. Breskey, California State University at Fullerton, Fullerton, CA; S. Lacey, Indiana University School of Medicine, Indianapolis, IN.

7:30 p.m.-8:00 p.m.

CS-138-05 Heavy Metals Dust at a Joint Military Medical Center. S. Witek-Eames, Walter Reed National Military Medical Center, Washington DC.; J. Gelker, J. Krantz, Uniformed Services University of Health Sciences, Washington DC.

PO 139

Respiratory Protection II

5:30 p.m.-8:00 p.m. | Palais, 516d

Arranger/Moderator: L. Janssen, Larry Janssen Consulting, LLC, Stillwater, MN. Monitors: P. Platcow, AECOM Environment, Boston, MA; W. Newcomb, NIOSH, South Park, PA.

5:30 p.m.-6:00 p.m.

SR-139-01 Fabrication and Verification of New NIOSH Headform Designs with Skin-Analog. P. Joe, C. Lungu, University of Alabama at Birmingham, Birmingham, AL.

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

SR-139-02 Laboratory Study to Assess Causative Factors Affecting Temporal Changes in Filtering-Facepiece Respirator Fit – Two-Year Assessment of Fit Changes. Z. Zhuang, A. Palmiero, M. Bergman, M. Joseph, R. Roberge, NIOSH, Pittsburgh, PA.

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

SR-139-03 Real-Time Fit of a Respirator During Simulated Health Care Tasks. J. Hauge, L. Brosseau, University of Minnesota, Minneapolis, MN; M. Roe, C. Colton, 3M, Saint Paul, MN.

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

CS-139-04 The Use of Video Exposure Monitoring in a Training Video to Motivate Fit-Testing, and the Appropriate Use of Health Care N95 Respirators. M. Cohen, University of Washington, Seattle, WA; M. Roe, 3M Company, Minneapolis, MN; L. Brosseau, University of Minnesota, Minneapolis, MN.

7:30 p.m.-8:00 p.m.

SR-139-05 Safety Climate and Respirator Practices and Policies in Acute Care Hospitals. L. Brosseau, K. Cline, University of Minnesota, Minneapolis, MN; L. Conroy, M. Sietsema, University of Illinois, Chicago, IL

RT 239

Occupational Respirable Crystalline Silica: A Global Concern

5:30 p.m.-8:00 p.m. | Palais, 514

Arranger/Moderator: M. O'Reilly, Workplace Health Without Borders, Missauga, ON, Canada. **Monitors:** T. Boyle, AirQuest Environmental, Inc., Fort Lauderdale, FL; A. Cutz, Matters and Associates, Markham, ON, Canada.

Although it has been more than 100 years since Dr. Alice Hamilton did her groundbreaking work with stonecutters' respirable crystalline silica (RCS) expo-

sure and their development of silicosis, RCS is still a problem in the workplace globally. The official death rate from silicosis in the U.S. is 200 deaths per year. In many places around the world the death rate is orders of magnitude greater. In addition to silicosis, RCS is associated with lung cancer, pulmonary tuberculosis (PTB), and chronic obstructive pulmonary disease (COPD), and adversely affects the renal and immunological systems. These adverse effects are not typically included in the mortality and morbidity rates traditionally associated with occupational exposure to RCS and often go uncounted and undocumented. This roundtable explores RCS exposures associated with novel applications (denim sandblasting) as well as more traditional exposures associated with mining and construction. Because the emerging consensus is that no exposure to RCS is without risk, the difficulty of where to set occupational exposure limits is explored and control measures presented.

- **What Is the Relationship Between Exposure to RCS and Disease?** K. Hedges, University of Western Sydney, Toronto, ON, Canada.
- **Nano- to Micron-Sized Silica: Genotoxicity Testing in Occupational Settings.** G. Cakmak-Demircigil, Gazi University, Ankara, Turkey.
- **Construction Workers' Exposure to Respirable Crystalline Silica: Analysis of a Database Compiled from the Literature.** M. Gerin, Université de Montréal, Montréal, QC, Canada.
- **Bridging the Gap – Methods to Facilitate Successful Understanding of Silica Exposures and Controls in Construction.** L. Capicik, Brasfield and Gorrie, LLC, Kennesaw, GA.
- **Silica Dust Exposure Controls in Small-Scale Building/Structure Demolition Operations in Developing Countries.** C. Muianga, Eduardo Mondlane University, Maputo, Mozambique.

RT 240

Industrial Ventilation: Moving to a World View

5:30 p.m.-8:00 p.m. | Palais, 516a

Arranger: K. Paulson, NAVFAC EXWC, Port Hueneme, CA. **Moderator:** G. Rajhans, Gyan S. Rajhans & Associates Inc., Mississauga, ON, Canada. **Monitors:** N. Wilk, Golder Associates Ltd., Mississauga, ON, Canada; R. Dayringer, MIOSHA, Ithaca, MI.

Industrial ventilation (IV) is used around the world to control occupational health and safety exposures to hazardous substances. Misunderstandings occur when adapting a worldwide mathematics and terminology to prepare guidance on IV design, troubleshooting, applications, and maintenance. Differences include pressure (mm H₂O, in. H₂O, Pascals) terminology, even duct sizing. This roundtable presents a unifying approach to IV design terminology by using a hybrid system. New Ventilation Solution (VS) drawings are discussed. Updated air pollution control equipment and recent improvements in fan and control technology will be covered. Finally, while a good design is critical to worker protection, testing and troubleshooting are essential to maintain a high-quality system.

- **Moving into the Worldwide IV Community.** G. Lanham, KBD/TECHNIC Inc. (Retired), Cincinnati, OH.
- **Metrification Decisions for the Industrial Ventilation Manual.** G. Lanham, KBD/TECHNIC Inc. (Retired), Cincinnati, OH; R. Hughes, NIOSH (Retired), Cincinnati, OH.
- **Fans, Controls, and Air Pollution Control Equipment.** J. Hale, Air Systems Corporation, Clemmons, NC.
- **Partnering with the Engineering Community.** J. McKernan, U.S. EPA, Cincinnati, OH.
- **So You Have a IV New System? What Next?** K. Paulson, NAVFAC EXWC, Port Hueneme, CA.

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Questions? Visit the Speaker Ready Room, Palais, 516c

7:00 a.m.–10:30 a.m.

Registration, Palais, Viger Hall

7:30 a.m.–4:30 p.m.

Speaker Ready Room, Palais 516c

8:00 a.m.–5:00 p.m.

- 801 Train-the-Trainer Workshop: Improving IH Exposure Judgements, Palais, 512f

8:30 a.m.–9:30 a.m.

- CR 319 Predict the “Shortcut” Before it Results in an Employee Injury, Palais, 515
- CR 320 Building A Safety and Health Culture at the World’s Largest Airline, Palais, 516d

8:30 a.m.–10:30 a.m.

- PO 140 Biosafety and Environmental Microbiology III, Palais, 510b
- PO 141 International Applications of Occupational Hygiene, Palais, 511b
- RT 241 Global Exposure Limit Setting Processes – Harmonization on an OEL Hierarchy Approach, Palais, 514
- RT 242 Notable Confined Spaces, Palais, 513a
- RT 243 Blending Art and Science to Meet the Needs of Responsible Nanotechnology: An Update from NIOSH, Palais, 516a

8:30 a.m.–11:00 a.m.

- PO 142 Emergency Preparedness and Response, Palais, 513d
- PO 143 Ergonomic Processes, Tools and Interventions, Palais, 520c
- RT 244 GHS – The New Hazard Communication for North America, Palais, 510a
- RT 245 New Pathways to Achieve Safety Performance: Worker Training and Human Factors, Palais, 511a

8:30 a.m.–11:30 a.m.

- RT 246 Laboratory Ventilation, Balancing Safety and Energy Conservation, Palais, 520a
- RT 247 Respiratory Protection in Health Care, Palais, 520b

9:00 a.m.–Noon

TT-07 Hydro-Quebec Beauharnois Generating Station, Bus departs Palais, Viger Street, at 8:45 a.m.

10:00 a.m.–11:00 a.m.

- CR 321 The Value of OS&H Management Systems and Prevention through Design (PtD) Standards, Palais, 515
- CR 322 Utilizing ANSI Z244.1 and NFPA 70E for Lockout/Tagout Hazardous Energy Control Procedure Generation, Palais, 516d

11:30 a.m.–12:30 p.m.

Herbert E. Stokinger Award Lecture, Palais, 511a

12:30 p.m.–1:30 p.m.

- CR 323 Industrial Ecology: What Is It and Why Should Industrial Hygiene Care?, Palais, 515

12:30 p.m.–3:30 p.m.

- PO 144 Aerosols III, Palais, 516d
- PO 145 Indoor Environmental Quality II, Palais, 511c
- 12:30 p.m.–4:30 p.m.
- PO 146 Occupational Epidemiology, Palais, 513d
- PO 147 Sampling and Analysis: Trends in Exposure Assessments, Palais, 511b
- RT 248 Confined Space Incidents in Canada – What Have We Learned?, Palais, 514
- RT 249 Dermal Exposure Assessment, Palais, 513a
- SS 004 Health Hazards Associated with Hydraulic Fracturing and Other Natural Gas Activities, Palais, 516a

2:00 p.m.–3:00 p.m.

- CR 324 Safety Eyewear and ANSI Standards – Seeing is Believing!, Palais, 515

AIHA®

8:30 a.m.–10:00 a.m.

Volunteer Group Chairs Meeting, Palais, 512g

8:30 a.m.–10:30 a.m.

Annual Business Meeting, Palais, 511c

9:00 a.m.–10:00 a.m.

Local Section Officers Training, Palais, 512d

10:00 a.m.–11:30 a.m.

Volunteer Group Secretaries Orientation Meeting, Palais, 512g

11:30 a.m.–4:00 p.m.

Board of Directors Meeting, Sheraton, Drummond Centre, Level 3

1:00 p.m.–3:00 p.m.

Healthcare Working Group, Palais, 512g

AIHA Registry Programs®

1:00 p.m.–5:00 p.m.

- Exposure Decision Analysis Registry Exam, Palais 512h

Ancillary

10:00 a.m.–Noon

Canadian Registration Board of Occupational Hygienists (CROH) Annual General Meeting, Intercontinental Hotel, Galerie d’Art

Note Meeting Rooms ...

Palais des congrès de Montreal = Palais
Le Centre Sheraton Montreal = Sheraton
Le Westin Montreal = Westin

CR 319

Predict the “Shortcut” Before It Results in an Employee Injury

8:30 a.m.–9:30 a.m. | Palais, 515

Presenter: B. Moriarty, Chubb Insurance, Glen Ellyn, IL.

A leading cause of workplace injuries involves unsafe acts due to employees taking shortcuts. The seminar will focus on how to predict these short cuts before they result in an employee injury. Unsafe conditions can result in employee injuries and OSHA violations. Many companies today have developed programs, which target and remove unsafe conditions on a continual basis. The seminar will focus on how addressing unsafe acts and conditions will help eliminate employee injury sources and address potential OSHA violations.

CR 320

Building A Safety and Health Culture at the World’s Largest Airline

8:30 a.m.–9:30 a.m. | Palais, 516d

Presenter: K. Fiore, United Airlines, Chicago, IL.

The path of building a safety and health culture at the world’s largest airline – consolidating two companies and aligning two companies with safety and health – implementing the science of safety and health into the business to allow for a top down approach to safety and health.

PO 140

Biosafety and Environmental Microbiology III

8:30 a.m.–10:30 a.m. | Palais, 510b

Arranger/Moderator: C. Peart, IES Engineers, Blue Bell, PA. **Monitors:** R. Strode, NA, Wheat Ridge, CO; P. Hauck, Glen Cove, NY.

8:30 a.m.–9:00 a.m.

CS-140-01 Lies, Damned Lies, and Statistics: Data Interpretation and the Danger of False Conclusions. H. Burge, J. Manfrida EMLab P&K, Phoenix, AZ.

9:00 a.m.–9:30 a.m.

SR-140-02 First Finding of Cladophialophora bantiana from the Indoor Environment in the United States. Z. Jurjevic, C. Li, EMSL Analytical, Inc., Cinnaminson, NJ; J. Dobranic, EMSL Analytical, Inc., Houston, TX.

9:30 a.m.–10:00 a.m.

CS-140-03 Search for Fungus Using Mold Detection Canines. A. O'Donnell, HSST Conseils Inc., Montréal, QC, Canada.

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

SR-140-04 Study on Survivability of Airborne Yeast Using an Electrodynamical Balance. T. Kuo, C. Hsu, C. Chen, C. Hsu, C. Chen, National Taiwan University, Taipei, Taiwan; Y. Kuo, Chung Hwa University of Medical Technology, Tainan, Taiwan.

PO 141

International Applications of Occupational Hygiene

8:30 a.m.-10:30 a.m. | Palais, 511b

Arrangers: S. Chiusano, U.S. Department of Defense Office of Inspector General, Columbia, MD; N. Townsend, Oakland, CA. **Moderator:** K. Tait, International Safety Systems, Inc., NY. **Monitors:** A. Cutz, Health+Safety Matters & Associates, Markham, ON, Canada; T. Mehta, International Safety Systems, Inc., Washingtonville, NY.

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

CS-141-01 Application of Industrial Hygiene Risk Assessment Model at Nine Sites in Six Countries in Asia. A. Sharma, ISS (India) Consultancy Services Pvt. Ltd., New Delhi, India; M. Mehta, T. Mehta, International Safety Systems Inc., Washingtonville, NY.

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

CS-141-02 IHSE Issues Between Western and Chinese Construction Companies on International Infrastructure Projects. L. Svirchev, Svirchev OHS Management, Vancouver, BC, Canada.

9:30 a.m.-10:00 a.m.

CS-141-03 Pesticide Management System in Samsung Everland, Korea. H. Tae, T. Ahn, M. Ko, E. Kwon, Y. Kim, I. Yoo, Samsung Everland, Seoul, Republic of Korea.

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

CS-141-04 REACH and Product Stewardship — A Case Study. K. Kavar, Actio Corp., Naperville, IL.

RT 241

Global Exposure Limit Setting Processes — Harmonization on an OEL Hierarchy Approach

8:30 a.m.-10:30 a.m. | Palais, 514

Arranger: C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA. **Moderator:** J. Perkins, UTHSC Houston School of Public Health, San Antonio, TX. **Monitors:** S. Ripple, Dow Chemical Company, Midland, MI; K. Niven, Shell International, The Hague, Netherlands.

Industrial hygienists have considered OELs to be one of the most effective tools for performing risk assessments upon which risk management strategies for worker protection can be based. OELs were established for airborne workplace chemicals by various authoritative organizations for over 60 years. With the changing regulatory arena, shifting centers of manufacturing growth, a move toward a global

perspective on solving health issues, tendencies toward banding, and the formulation of control assumptions without the use of exposure data, the time to re-examine the continued value of OELs is now, particularly since only about 1,000–2,000 of over 100,000 chemicals in worldwide use are presently either regulated by a government statute or have a guideline OEL. In defining future approaches, the presenters highlight the OEL-setting processes today, their role in occupational hygiene and risk assessment, the profiling of risk-related tools to complement traditional exposure limit setting, a clarification of existing tools and their strengths, and today's challenges. The roundtable will be integrated with audience participation to define tangible future action items for the profession.

- **Poll to Calibrate Audience Knowledge and Expectations.** P. Logan, 3M, St. Paul, MN.
- **International Approaches and Influence on Today's OEL-Setting Processes.** C. Laszcz-Davis, The Environmental Quality Organization, LLC, Lafayette, CA.
- **Harmonization of Global Suite of OEL Tools for Occupational Risk Assessment.** D. O'Malley, Genesis Environmental LTD, Wirral, United Kingdom.
- **OEL Hierarchy: What Is in the Tool Kit?** A. Maier, Toxicology Excellence for Risk Assessment, Cincinnati, OH.
- **OELs as Tools for Risk Based Decisions.** M. Jayjock, Jayjock Associates LLC, Langhorne, PA.
- **Global Trends in Use of OEL Hierarchy — Review of Poll.** P. Logan, 3M, St. Paul, MN.
- **Q&A and Closing Remarks.** J. Perkins, UTHSC Houston School of Public Health, San Antonio, TX.

RT 242

Notable Confined Spaces

8:30 a.m.-10:30 a.m. | Palais, 513a

Arranger/Moderator: W. Brown, ISHM, Fairborn, OH. **Monitors:** C. Muncy, Concurrent Technologies Corp., Donnelsville, OH; C. Dellacqua, Amgen, Thousand Oaks, CA.

In this presentation, health and safety professionals will present typical and unusual examples of confined space entries and confined space entry problems that resulted in various outcomes from good to bad. The presenters will describe the conditions and the outcomes that resulted from entry into the confined spaces that actually occurred. They will outline what the conditions were and how the conditions were resolved and, in some cases, without acceptable outcomes.

- **Ventilation of Deep Spaces in Construction: A Necessary Advance.** N. McManus, NorthWest Occupational Health and Safety, North Vancouver, BC, Canada.
- **A Tank Truck Fatality Leads to Civil Litigation.** M. DeVany, DeVany Industrial Consultants, Vancouver, WA.

- **Train Operations in Railway Tunnels.** N. McManus, NorthWest Occupational Health and Safety, North Vancouver, BC, Canada.
- **Confined Space Accident at a Paper Mill Wastewater Treatment Facility.** R. Bowers, IHI Environmental, Salt Lake City, UT.
- **WITHDRAWN: Remediation and Construction Sites — Meeting Entry Rescue Requirements.** G. Crawford, R. Weston, Inc., West Chester, PA.

RT 243

Blending Art and Science to Meet the Needs of Responsible Nanotechnology: An Update from NIOSH, Including Late-Breaking Topics

8:30 a.m.-10:30 a.m. | Palais, 516a

Arranger/Moderator: C. Geraci Jr., NIOSH, Cincinnati, OH. **Monitors:** D. Heidel, Bureau Veritas North America, Inc., Edison, NJ; C. Sparks, NIOSH, Cincinnati, OH.

NIOSH is the lead agency in the U.S. responsible for conducting research and making recommendations for the safe development of nanotechnology. The NIOSH Current Intelligence Bulletin on Carbon Nanotubes and Nanofibers is the most recent guidance document making use of results from toxicology, risk assessment, field exposure assessments, and control evaluations to develop guidance; and includes a Recommended Exposure Limit. NIOSH is also developing a broader strategy for developing Occupational Exposure Limits based on a categorical approach. A key area of interest for NIOSH and all of its partners in the U.S., Canada, and internationally is that of advances in field measurements. Measuring engineered nanomaterials in the field is a critical element of evaluation actual worker exposure, characterizing risk, and determining the effectiveness of engineering control strategies. The current art and science of field measurement includes a blending of professional judgment, direct-reading instruments, integrated sampling, and careful interpretation of results. Finally, NIOSH has been evaluating the dustiness and explosion potential of engineered nanomaterials. Knowledge in these two areas will be extremely valuable in planning an effective risk management program for high-volume processes using dry nanomaterials. The focus of this roundtable will be on updating the attendees on significant new results from key program areas. Please join us for this highly interactive session that will be held live at AIHce in addition to being broadcast virtually. After brief update presentations, audience participation will be encouraged via discussion and Q&A.

- **Nanomaterials Toxicology — Key Results from Inhalation and *in-vitro* Studies.** C. Geraci Jr., NIOSH, Cincinnati, OH, on behalf of V. Castranova, NIOSH, Morgantown, WV.

- **The NIOSH Current Intelligence Bulletin: Occupational Exposure to Carbon Nanotubes and Nanofibers.** L. Hodson, NIOSH, Cincinnati, OH.
- **Update on the Industry-Wide Study of CNT Workers.** M. Dahm, NIOSH, Cincinnati, OH.
- **Strategies for Occupational Exposure Limits for Engineered Nanomaterials.** C. Geraci Jr., on behalf of E. Kuempel, NIOSH, Cincinnati, OH.
- **Dustiness of Nanomaterials and Implications for Risk Management (Late-Breaking).** D. Evans, NIOSH, Cincinnati, OH.
- **Performance of Real-Time Aerosol Monitors and Improvements in Exposure Assessment Strategies.** C. Beaucham, NIOSH, Cincinnati, OH.
- **Advances in Field Measurements.** K. Martinez, NIOSH, Cincinnati, OH.

PO 142

Emergency Preparedness and Response

8:30 a.m.-11:00 a.m. | Palais, 513d

Arranger: J. Hill, Alameda, CA. **Moderator:** E. Clas, Clas Consulting LLC, Norfolk, MA. **Monitors:** K. Murphy; J. Ignacio, U.S. Public Health Service, Waldorf, MD.

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

CS-142-01 Restoring Safe Operations After the Fukushima Disasters of 2011. N. Orr, Becton Dickinson and Co., Franklin Lakes, NJ.

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

CS-142-02 How to Respond to Quick Decisions for Radiation Safety. R. Johnson, Radiation Safety Counseling Institute, Rockville, MD.

9:30 a.m.-10:00 a.m.

SR-142-03 Enhancement of Protection Offered by Safe Havens Using Portable Air Contaminant Removal Systems. V. Aizenberg, S. Maberti, ExxonMobil, Baytown, TX; M. Yermakov, S. Grinshpun, University of Cincinnati, Cincinnati, OH.

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

SR-142-04 Firefighter's Noise Exposure and Noise-Induced Hearing Loss. T. Kang, J. Kim, S. Kang, S. Ham, C. Yoon, Seoul National University, Seoul, Republic of Korea; Y. Yang, Seoul Metropolitan Fire Service Academy, Seoul, Republic of Korea.

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

CS-142-05 The New Hazardous Materials Processing Regulation — An Overview for Companies with Operations in Massachusetts. C. Briggs, ENVIRON International Corp., Boston, MA.

PO 143

Ergonomic Processes, Tools and Interventions

8:30 a.m.-11:00 a.m. | Palais, 520c

Arranger: L. Nystrom, DuPont, Wilmington, DE. **Moderator:** B. Cawley, Air Products and Chemicals, Allentown, PA. **Monitors:** K. Irving-Deady, Computing with Comfort, Concord, MA; M. Werrell, Ergoworks Consulting, Gaithersburg, MD.

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

CS-143-01 Don't Hire Your Next Injury: Benefits of Pre-Employment Screening. T. Silva, Atlas Ergonomics, Grand Haven, MI.

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

CS-143-02 Eliminating Duplication of Effort in Your Ergonomics and Injury Management Processes. T. Silva, Atlas Ergonomics, Grand Haven, MI.

9:30 a.m.-10:00 a.m.

CS-143-03 Office Ergonomics Solution for a Geographically Dispersed Work Force. T. Silva, Atlas Ergonomics, Grand Haven, MI.

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

CS-143-04 A Case Study of Utility Workers' Perception of the Ergonomic Assessment Tools in the AIHA Ergonomic Tool Kit. T. Blackwell, Colorado Springs Utilities, Colorado Springs, CO; R. Thomas, Auburn University, Auburn, AL.

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

SR-143-05 What Can Be Done to Prevent the Chronic Health Effects of Shiftwork? A Systematic Review of the Evidence. M. Pahwa, P. Demers, Occupational Cancer Research Centre, Toronto, ON, Canada; S. Neil, University of British Columbia, Vancouver, BC, Canada; C. Gotay, University of British Columbia Cancer Prevention Centre, Vancouver, BC, Canada.

RT 244

GHS — The New Hazard Communication for North America

8:30 a.m.-11:00 a.m. | Palais, 510a

Arranger: D. Deeds, Industrial Health and Safety Consultants, Inc., Shelton, CT. **Moderator:** D. Weekes, InAir Environmental Ltd, Ottawa, ON, Canada. **Monitors:** L. Hodson, NIOSH, Cincinnati, OH; S. Dawson, DuPont, Pascagoula, MS; K. Trefethen, Kaiser Permanente, Pasadena, CA.

The U.S. has implemented the regulatory changes to adopt the GHS and is now in the transition phase. Mexico has issued a voluntary standard permitting the use of the GHS for workplace labels and SDSs. Canada is in the process of making the necessary changes to legislation and regulations to conform to the GHS. This Roundtable will explore the NAFTA status of GHS adoption and give a brief update on the status of global implementation. Our OSHA speakers will review the new Hazcom Standard with an emphasis on implementation issues and guidance that has been issued in the past year to assist business with the transition. Our speaker from Canada will update us on where Canada is in the implementation process and when we can expect their final regulatory changes. A final speaker will discuss Mexico's NOM and how companies in Mexico are dealing with a non-mandatory system and review the status of global implementation.

- **Hazcom 2012: The Requirements and Challenges in Implementation, Part 1.** M. Ruskin, OSHA, Washington, DC.
- **Hazcom 2012: The Requirements and Challenges in Implementation, Part 2.** J. Silk, Occupational Safety and Health Consultant, Valencia, PA.
- **Implementation of the GHS for Workplace Chemicals in Canada.** R. Miller-Lee, Health Canada, Ottawa, ON, Canada.
- **Implementation of the GHS in Mexico and Globally.** D. Deeds, Industrial Health & Safety Consultants, Inc., Shelton, CT.

RT 245

New Pathways to Achieve Safety Performance: Worker Training and Human Factors

8:30 a.m.-11:00 a.m. | Palais, 511a

Arranger: K. Slates, Indiana University, Bloomington, IN. **Moderator:** V. Murray, BP America, Houston, TX. **Monitors:** A. Thomas, Boeing Corporation, Huntsville, AL; C. Tinner, MWV, Cottonont, AL.

Our goal is to engage the audience in thought-provoking dialogue and stimulate discussion that raises questions related to safety performance, organizational leadership, safety culture, worker training, and hazard assessment. Mr. Julius Rhodes's presentation will focus on leadership development techniques and discuss methods leaders can use to increase safety performance. Mr. Buck Cameron will discuss methods and considerations for effective worker training. The last four speakers will describe techniques and strategies for assessing and controlling hazardous conditions in the workplace. Specifically, Ms. Sharon Beard will discuss details of a national worker safety training program at a hazardous waste site and its holistic approach to training. Dr. Lawrence's presentation will provide criteria to assess situational awareness and decision making to improve safety performance. Dr. Oyewole's presentation will review the impact of human errors in notable chemical incidents such as the 2005 Texas City Refinery explosion and the recent Deepwater Horizon incident (2010). Dr. Bruce Lippy will provide information on methods to train workers to recognize, evaluate, and control hazards associated with exposure to nanoparticles.

- **WITHDRAWN: Are Leaders Born or Made? Coaching Leadership.** J. Rhodes, MPR Group, Chicago, IL.
- **The Impact of Cultural Differences on the Acceptance and Use of Health- and Safety-Related Information.** B. Cameron, Center to Protect Workers' Rights Strategic Solutions, Seattle, WA.
- **Developing Interventions and Training Programs to Address Occupational Health Disparities.** S. Beard, NIH, Research Triangle Park, NC.

- **Situational Awareness and Decision Making.** N. Lawrence, Embry-Riddle Aeronautical University, Daytona Beach, FL.
- **The Rising Case for Proactive Change: Understanding the Impact of Human Errors in Notable Process Safety Management Incidents.** S. Oyewole, U.S. Chemical Safety & Hazard Investigation Board, Washington, DC.
- **Training Workers on the Risks of Nanotechnology: Hazard Communication at the Cutting Edge.** B. Lippy, The Lippy Group, LLC, Baltimore, MD.

RT 246

Laboratory Ventilation, Balancing Safety, and Energy Conservation

8:30 a.m.-11:30 a.m. | Palais, 520a

Arranger/Moderator: M. Fahim, NC State University, Raleigh, NC. **Monitors:** M. Manna, PPG Industries, Inc., Monroeville, PA; V. Rodriguez, Ligand Pharmaceuticals, Inc., San Diego, CA.

As energy conservation is one of the key objectives and requirements for new laboratory design, a synergistic relationship between architects, engineers, and laboratory health and safety professionals is critical. This roundtable provides examples of such collaboration and insight into energy conservation measures, including key considerations for effectively balancing both safety and energy conservation to result in optimal design. An update on the work being done by a group of health and safety professionals along with architects and engineers to expand the scope of the current Labs21 Environmental Performance Criteria is included.

- **Smart Labs Stay Safe and Sustainable.** M. Cheszek, Caterpillar, Brooklyn Park, MN.
- **Effectively Integrating EHS and Laboratory HVAC Energy Conservation.** P. Greenley, MIT, Cambridge, MA.
- **Building on the Lab21 Environmental Performance Criteria (EPC).** M. Austin, University of Minnesota, Minneapolis, MN.
- **Information Tools to Manage Function and Performance of Laboratory Ventilation Systems.** J. Coogan, Siemens Building Technologies, Buffalo Grove, IL.
- **Safety Considerations for Lab Ventilation Design or Retrofit Projects.** K. Kretchman, NC State University, Raleigh, NC.
- **WITHDRAWN: The Exhaust Filtration Paradox: When Less Is More.** S. Lengerich, Eli Lilly and Company, Indianapolis, IN.

RT 247

Respiratory Protection in Health Care

8:30 a.m.-11:30 a.m. | Palais, 520b

Arranger: J. Hauge, 3M, St. Paul, MN. **Moderator:** J. Johnson, JSJ and Associates, Pleasanton, CA. **Monitors:** C. Johnson, J. Kunz, 3M, St. Paul, MN.

Proper assignment and use of respiratory protection have increased in health care settings. However, studies continue to indicate that misconceptions and non-adherence are still widespread and that effective respirator use in health care workplaces falls short of optimal. Efforts are ongoing in research institutions, governmental agencies, and health care organizations to propagate better understanding and buy-in from health care workers and managers to improve the rate of effective respirator use. This session highlights some of these efforts, including new respirator selection guidance in a Canadian CSA standard, the NIOSH Respirator Evaluation in Acute Care Hospitals Study (REACH) Study, N95 respirator comfort and fit, a new video-based respirator fit training tool, and a program administrator's perspective on the implementation of an effective respiratory protection program in a major health care clinic.

- **Respiratory Protection Program Implementation: Opportunities in the Health Care Environment.** J. Nesbitt, Mayo Clinic, Rochester, MN.
- **Recommendations for Respiratory Protection Programs in Acute Care Hospitals.** L. Brosseau, University of Minnesota, Minneapolis, MN.
- **Lessons Learned from Implementing an Aerosol-Transmissible Disease Standard.** S. Derman, Medishare Environmental Health & Safety Services, Cupertino, CA.
- **Respiratory Selection for Biohazards in the Canadian Standard for Selection, Use and Care of Respirators.** S. Smith, 3M Canada, Brockville, ON, Canada.
- **Fit and Comfort Assessment of N95 Filtering-Facepiece Respirators.** Z. Zhuang, NIOSH, Pittsburgh, PA.
- **Real-Time Simulated Workplace Fit Factor Method and Video Paired with Data.** M. Roe, 3M, St. Paul, MN.

CR 321

The Value of OS&H Management Systems and Prevention through Design (PtD) Standards

10:00 a.m.-11:00 a.m. | Palais, 515

Presenters: G. Popov, J. Zey, UCM, Warrensburg, MO.

EHS professionals are facing increased pressure to diversify their skills and develop new risk assessment techniques. A small company requested a new product risk assessment and hazard evaluation. The product is intended for export to the European

Union and had to meet international standards. On the other hand, the product is manufactured in the U.S., and the management wanted to implement PtD principles. The authors developed new tools and successfully implemented the new PtD model to evaluate the product.

CR 322

Utilizing ANSI Z244.1 and NFPA 70E for Lockout/Tagout Hazardous Energy Control Procedure Generation

10:00 a.m.-11:00 a.m. | Palais, 516d

Presenter: P. Zoubek, Zoubek Consulting, LLC, San Diego, CA.

Regulatory standards require that the employer generate equipment-specific hazardous energy control (Lockout/Tagout) procedures for worker protection against hazardous energy. ANSI Z244.1 (Control of Hazardous Energy Lockout/Tagout and Alternative Methods) and NFPA 70E (Standard for Electrical Safety in the Workplace) consensus standards provide direction for energy control procedure generation. This session outlines how to utilize ANSI Z244.1 and NFPA 70E for energy control procedure creation. Participants will perform a hands-on exercise on energy control procedure generation.

Herbert E. Stokinger Award Lecture

Hazard and Risk Characterization of Inhaled Carbon Nanomaterials

11:30 a.m.-12:30 p.m. | Palais, 511a



Lecturer: Günter Oberdörster, DVM, PhD, Professor, Department of Environmental Medicine, University of Rochester.

While occupational exposures to carbon black consisting of primary nanosized particles have occurred for decades and are well recognized,

the discovery of new forms and shapes of carbon within the steadily advancing field of nanotechnology resulted in the development of carbon-based materials creating potential new exposure hazards. The unique desirable properties of these new materials for diverse technological applications and for therapeutic and diagnostic uses in nanomedicine contrast with perceived or real risks associated with nanotechnology in general. Reports of adverse effects of nanomaterials, including carbon nanomaterials, have raised serious concerns about their safety and potential adverse effects following

exposure during their manufacture, use, and disposal. Assessing a potential risk requires knowledge about both hazard and exposure. Analyzing exposure-dose-response relationships observed in multidose subchronic inhalation studies in rats with carbon black, multiwalled carbon nanotubes and carbon nanofibers and comparing pulmonary inflammatory responses with those of inhaled negative and positive reference particles is used as an example to establish hazard categories based on different dosimetrics. Furthermore, estimation of a chronic no-effect level for rats based on accumulated lung burdens can be combined with a dosimetric extrapolation to estimate a human equivalent concentration for purposes of human risk assessment. Potential extrapulmonary effects need to be evaluated as well for a comprehensive risk assessment.

CR 323

Industrial Ecology: What Is It and Why Should Industrial Hygiene Care?

12:30 p.m.-1:30 p.m. | Palais, 515

Presenter: M. O'Reilly, Empire State College, Syracuse, NY.

Industrial Ecology integrates environmental health science, social science, and economics in response to the challenges created by ever-increasing demand for energy, raw materials, and clean water, often using life cycle analysis to achieve its goal. The same intellectual disciplines that support industrial ecology also provide the basis for sustainability. This presentation addresses what industrial hygiene brings to industrial ecology, what industrial hygiene can learn from industrial ecology, and why both fields should embrace each other.

PO 144

Aerosols III

12:30 p.m.-3:30 p.m. | Palais, 516d

Arranger/Moderator: M. Isenstein, U.S. Army PHCR-Pacific, APO, Japan. **Monitors:** K. Chatterjee, University of Cincinnati, OH; D. Sleeth, University of Utah, Salt Lake City, UT.

12:30 p.m.-1:00 p.m.

SR-144-01 Remote Monitoring of Airborne Dust with Lidar. G. Joy, NIOSH, Pittsburgh, PA; D. Cantin, S. Turbide, INO, Quebec, QC, Canada.

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

CS-144-02 Exposure to Crystalline Silica at Alberta Work Sites. D. Radnoff, Alberta Human Services, Edmonton, AB, Canada.

1:30 p.m.-2:00 p.m.

SR-144-03 Particle Size Distribution in Aluminum Manufacturing Facilities. S. Liu, K. Hammond, University of California, Berkeley, Berkeley, CA.

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

SR-144-04 Occupational Exposure to Mineral Oil Metalworking Fluid (MWF) Mist: Development of New Methodologies for Mist Sampling and

Analysis. K. Huynh, H. Herrera, Institute for Work and Health (IST), Lausanne, Switzerland; J. Parrat, Service des Arts et Metiers et du Travail (LIST), Delémont, Switzerland; R. Wolf, SUVA, Luzern, Switzerland; V. Perret, TOXpro SA, Carrouge, Switzerland.

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

SR-144-05 Determination of Sampling Efficiency for Respirable Size-Selective Samplers with Three Different Spherical Particles. T. Lee, M. Harper, NIOSH, Morgantown, WV; E. Cauda, NIOSH, Pittsburgh, PA.

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

SR-144-06 Factors Influencing the Control of Respirable Charged Particles by Surfactant Spray. M. Wang, P. Raynor, University of Minnesota, Minneapolis, MN.

PO 145

Indoor Environmental Quality II

12:30 p.m.-3:30 p.m. | Palais, 511c

Arranger: J. Hicks, Exponent, Inc., Oakland, CA. **Moderator:** W. Friedman, U.S. Dept. of Housing and Urban Development, Washington, DC. **Monitors:** J. Park, NIOSH, Morgantown, WV; E. Massawe, Southeastern Louisiana University, Hammond, LA.

12:30 p.m.-1:00 p.m.

CS-145-01 Air Quality Trends in Residential Locations. A. Delia, R. Freeman, M. Spartz, Prism Analytical Technologies, Inc., Mt. Pleasant, MI.

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

CS-145-02 Environmental Settled Lead Dust in a Commercial Office Building. R. Quenneville, B. Peprah, T. Harris Environmental Management Inc., Toronto, ON, Canada.

1:30 p.m.-2:00 p.m.

CS-145-03 Malodors at Automotive Parts Manufacturing Plant: Alkylpyrazine — An Unlikely Odorant. J. Kominsky, Environmental Quality Management, Inc., Cincinnati, OH.

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

CS-145-04 Developing a Sustainable Environmental Health and Safety (EHS) Program at Multiple Sites of an Information Technology Enabled Services in India. K. Chandrasekhar, P. Kondragunta, ISS (India) Consultancy Services, Pvt. Ltd., Bangalore, India; T. Mehta, M. Mehta, International Safety Systems, Inc., Washingtonville, NY.

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

SR-145-05 Assessment of Airborne Synthetic Musks in Pharmaceutical and Personal Care Products Manufacturing Sites in Taiwan. I. Wang, S. Tsai, National Taiwan University, Taipei City, Taiwan; S. Cheng, Institute of Occupational Safety and Health, Council of Labor Affairs, Taipei City, Taiwan.

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

SR-145-06 Determinations of Airborne Disinfection By-Products at Indoor Swimming Pools. H. Chang, S. Tsai, Institute of Environmental Health, National Taiwan University, Taipei, Taiwan.

PO 146

Occupational Epidemiology

12:30 p.m.-4:30 p.m. | Palais, 513d

Arranger: M. Waters, NIOSH, Cincinnati, OH. **Moderator:** T. Armstrong, ExxonMobil, Inc., Annandale, NJ. **Monitors:** M. Stenzel, Exposure Assessment Applications, LLC, Arlington, VA; J. Harvey, Pratt and Whitney, East Hartford, CT.

12:30 p.m.-1:00 p.m.

SR-146-01 Neurologic and Reproductive Effects of Solvents on Automotive Repair Workers: Assessment of Exposure for the Bay Area Solvent Study (BASS). K. Hammond, S. Liu, S. Horiuchi, B. Donovan, University of California, Berkeley, Berkeley, CA.

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

SR-146-02 Exposures to Organic Aerosols and Effects on Pulmonary Function Among Western U.S. Dairy Workers. S. Reynolds, M. Clark, M. Davidson, T. Keefe, J. Mehaffy, M. Bradford, N. Roman-Muniz, G. Dooley, Colorado State University, Fort Collins, CO; J. Poole, University of Nebraska Medical Center, Omaha, NE; F. Mitloehner, M. Schenker, M. Schenker, UC Davis, Davis, CA.

1:30 p.m.-2:00 p.m.

SR-146-03 Pulmonary Restriction Among Workers at a Food Flavoring Manufacturing Facility: A Follow Up Study. C. Ronk, D. Hollins, M. Jacobsen, A. Foda, D. Galbraith, D. Paustenbach, ChemRisk, LLC, San Francisco, CA.

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

SR-146-04 The Diesel Exhaust in Mines Study — Exposure Monitoring Surveys. J. Coble, OSHA, Washington, DC; P. Stewart, Stewart Exposure Assessments, LLC, Arlington, VA; R. Vermeulen, Utrecht University, Utrecht, Netherlands; A. Blair, D. Silverman, NCI, Rockville, MD.

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

CS-146-05 A New Hybrid Approach for Assigning Workplace Chemical Exposures in the Context of Population-Based Case-Control Epidemiologic Studies. L. Nadon, R. Lakhani, M. Rhazi, R. Bourbonnais, M. Parent, INRS-Institut Armand-Frappier, Laval, QC, Canada.

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

SR-146-06 Comparison Between Three Publicly Available Sources of Occupational Cadmium Measurements. S. Locke, Y. Chen, M. Friesen, NCI, Rockville, MD; S. Viet, Westat, Rockville, MD.

3:30 p.m.-4:00 p.m.

SR-146-07 Validation of a Practical Measurement Tool for Injury Prevention at Workplaces: The Prevention Index (PI). Y. Sun, J. Börger, F. Bochmann, IFA – DGVV, Sankt Augustin, Germany; M. Arning, Berufsgenossenschaft Holz und Metall, Mainz, Germany.

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

SR-146-08 Heat Stress and Incident Rates for Heat-Related Disorders and Acute Injury During Deepwater Horizon Cleanup Operations. M. Hiles, T. Bernard, University of South Florida, Tampa, FL.

PO 147

Sampling and Analysis: Trends in Exposure Assessments II

12:30 p.m.-4:30 p.m. | Palais, 511b

Arranger: D. Pastuf, Galson Laboratories, East Syracuse, NY. **Moderator:** P. Kistle, University of Iowa, Iowa City, IA. **Monitors:** E. Stuber, Galson Laboratories, East Syracuse, NY; M. Hsieh, Abbott Laboratories, North Chicago, IL.

12:30 p.m.-1:00 p.m.

SR-147-01 Volume Correction: To Correct or Not Correct When Particulate Sampling. S. Funk, R. Strode, A. Haugh, E. Rasmuson, A. Duane, Chemistry and Industrial Hygiene, Wheat Ridge, CO.

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

SR-147-02 Use of a Weighing Chamber. J. Chen, S. Huang, T. Kuo, C. Chen, National Taiwan University, Taipei, Taiwan; C. Hsieh, Institute of Occupational Safety and Health, New Taipei City, Taiwan; Y. Kuo, Chung Hua University of Medical Technology, Tainan, Taiwan.

1:30 p.m.-2:00 p.m.

SR-147-03 Long-Term Sampling with Mini Canisters — A Comparison With Sorbent Tubes. A. Rossner, J. Brown, D. Wang, Clarkson University, Potsdam, NY.

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

SR-147-04 Control of Process Parameters in Chemical Challenge Testing of Respirators Utilizing an Atmosphere Generator. C. Manning, G. Nelson, Assay Technology, Livermore, CA.

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

SR-147-05 Removal of Chromium Background from PVC Filters for Air and Wipe Testing. M. Rubenstein, S. Dible, B. Rohrbach, A. Schneider, U.S. Air Force, WPAFB, OH.

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

SR-147-06 Understanding Fibrous Biopyriboles and Phyllosilicates and the Science of Asbestos. S. Fitzgerald, Scientific Analytical Institute, Greensboro, NC.

3:30 p.m.-4:00 p.m.

SR-147-07 Quantitative Analysis Tendencies on Bulk Asbestos Proficiency Test Samples. J. Ennis, W. Winstead, RTI International, Research Triangle Park, NC.

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

SR-147-08 Simulation Study of Potential Historical User Asbestos Fiber Exposure from Cosmetic Body Talc Use. P. Sheehan, R. Kalmes, Exponent, Oakland, CA; P. Turnham, E. Anderson, Exponent, Alexandria, VA.

RT 248

Confined Space Incidents in Canada — What Have We Learned?

12:30 p.m.-4:30 p.m. | Palais, 514

Arranger: G. Clark, WorkSafeBC, Vancouver, BC, Canada. **Moderator:** A. Johnson, WorkSafeBC, Vancouver, BC, Canada. **Monitors:** H. Wong, Pacific Environmental Consulting, North Vancouver, BC, Canada; A. Sass-Kortsak, University of Toronto, Toronto, ON, Canada.

Despite the best efforts of health and safety professionals, workers continue to be seriously injured or die in confined spaces. Why do these accidents continue to happen? This roundtable will review some of the more recent confined space tragedies in Canada and discuss what regulators and other agencies are doing to prevent them in the future.

- **Deaths on a Mushroom Farm — What Happened and What Did We Learn?** G. Clark, WorkSafeBC, Vancouver, BC, Canada.
- **What Were the “Unprecedented Conditions” Identified in a 2010 Investigation Report into the Death of Four Workers in a Confined Space at the Sullivan Mine?** M. Denhoff, Husky Energy Inc., Calgary, AB, Canada.
- **Confined Space Hazard Management in the Petroleum Industry — From an IH’s Perspective.** R. Waterhouse, Encana Corporation, Calgary, AB, Canada.
- **How Do You Isolate a Confined Space in a Sewer?** E. Alvermaz, WorkSafeBC, Vancouver, BC, Canada.
- **Confined Space and Asbestos Hazards in the BC Hydro Underground Electrical System.** K. Hillman, BC Hydro, Burnaby, BC, Canada.
- **The CSA Definition of Confined Space — Is This the Best Model Moving Forward?** D. Gardner, Pinchin Environmental Ltd., Hamilton, ON, Canada.
- **WITHDRAWN One-Two-Three: Out.** M. Barré, AQHSST, CRBOH, BCRSP, Brossard, QC, Canada.
- **Confined Spaces: From Where Have We Come, What Have We Learned, To Where Must We Go, How Can We Get There?** N. McManus, Northwest Occupational Health & Safety, North Vancouver, BC, Canada.

RT 249

Dermal Exposure Assessment

12:30 p.m.-4:30 p.m. | Palais, 513a

Arranger: T. Carmody, 3M, St. Paul, MN. **Moderator:** T. Blodgett, 3M, St. Paul, MN. **Monitors:** S. Battista, 3M, Maplewood, MN; R. Burton, AEROTEK, INC, St. Paul, MN.

Inhalation exposure has traditionally been considered the most important exposure pathway for chemicals, with dermal exposure being a secondary exposure pathway. Skin diseases, however, consist of ~16%

of non-fatal occupational illnesses. Wipe sampling can be completed for some materials to assess potential exposures, but there are few exposure limits established for the dermal pathway. Dermal DNELs have been established for some materials through REACH legislation; however, caution must be used in their application. Many occupational health professionals look to skin notations to know whether a substance has the ability to penetrate the skin. The challenge has always been in estimating how much can permeate through the skin and contribute to an internal dose and effect. This roundtable will describe qualitative and quantitative dermal exposure assessment tools and methods, their uses, and provide some case studies.

- **A New Qualitative Dermal Exposure Assessment Tool.** S. Paradis, 3M, St. Paul, MN.
- **IH SkinPerm.** R. Tibaldi, ExxonMobil, Annandale, NJ.
- **A Case Study Using the AIHA Decision Logic for Qualitative Dermal Exposure Assessment: Dermal Phenol Exposure Potential in a Phenolic Resin Molding Operation.** J. Sahmel, ChemRisk, Inc., Boulder, CO.
- **Enhanced Qualitative Dermal Exposure Assessment Strategy.** S. Leeson, ExxonMobil, Leatherhead, Surrey, United Kingdom.
- **Dermal DNELs.** R. Roy, 3M, St. Paul, MN.
- **REACH Dermal Exposure Assessments.** J. Walton, 3M, St. Paul, MN.
- **ProtecPo: A Software for Predicting the Resistance of Polymeric Materials Used in the Manufacture of Chemical-Resistant Protective Gloves, Clothing, and Boots.** D. Drolet, IRSST, Montréal, QC, Canada.
- **Implementation of a Dermal Exposure Management Program.** K. Hacker, 3M, Knoxville, IA.

SS 004

Health Hazards Associated with Hydraulic Fracturing and Other Natural Gas Activities

12:30 p.m.-4:30 p.m. | Palais, 516a

Arranger: T. Hicks, Hicks Health & Safety, Golden, CO. **Moderator:** P. Owens, Shell Martinez Refinery, Martinez, CA. **Monitors:** J. Dawson, Talisman Energy USA, Inc., The Woodlands, TX; K. Jones, Total Petrochemicals & Refining USA, Inc., Houston, TX.

Natural gas well completion by hydraulic fracturing has received increasing public and regulatory interest. This roundtable will describe the process of hydraulic fracturing and the comparative toxicity of chemicals used down hole according to their function. Chemical ingredient-specific screening methods used by industry for the purpose of identifying and reducing overall product toxicity will be presented. Worker exposures to silica and other occupational health hazards present during well completion activities will be discussed as well as

those potentially moving off site. Control methods employed to reduce identified exposures, particularly respirable silica, will be presented along with preliminary results.

- **Hydraulic Fracturing: Accessing Shale and Tight Gas.** D. Cole, Shell Upstream Americas, New Orleans, LA.
- **A Screening-Level Method for Evaluating the Potential Human Health and Environmental Hazards Presented by Hydraulic Fracturing Chemicals.** D. Davies, Intrinsic Environmental Sciences, Inc., Calgary, AB, Canada.
- **Quantifying Air Quality Impacts Associated with Marcellus Shale Development in West Virginia.** N. Pekney, National Energy Technology Laboratory, U.S. Department of Energy, Pittsburgh, PA; M. McCawley, J. West Virginia University, Morgantown, WV.
- **NIOSH Field Effort to Assess Chemical Exposure in Oil and Gas Workers: Health Hazards in Hydraulic Fracturing.** J. Snawder, NIOSH, Cincinnati, OH.
- **OSHA's Efforts to Increase Employer and Worker Awareness of Safety and Health Hazards During Hydraulic Fracturing Operations.** J. Bearn, OSHA, Washington DC.
- **Addressing Potential Hazards and Exposure to Workers During Hydraulic Fracturing Operations.** J. Kind, D. Watts, Center for Toxicology and Environmental Health (CTEH), Little Rock, AR.
- **Managing Noise on Hydraulic Fracturing Sites — A Canadian Perspective.** K. Boot, Encana Corporation, Calgary, AB, Canada.
- **Sand (Proppant) Dust Control Strategies: Successes and Remaining Challenges in Reducing Worker Exposures to Respirable Silica.** T. Hicks, Hicks Health & Safety, Golden, CO.

CR 324

Safety Eyewear and ANSI Standards — Seeing is Believing!

2:00 p.m.-3:00 p.m. | Palais, 515

Presenter: K. Daems, Wolf Peak International, Layton, UT.

This course will put new meaning to the term “seeing is believing.” Often it is not understood what makes eyewear qualify as safety eyewear. Sometimes it is not even understood there are standards governing safety eyewear. This course will help attendees “see” more clearly with increased knowledge about the reasons to use safety eyewear, features available, and technologies used to produce safety eyewear, mandated safety standards, testing requirements, and standards enforcement.

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POSTER SESSIONS

Expo

Posters are grouped by topic and authors are stationed at their posters at designated times to answer questions. It's a great spot to meet colleagues and discuss the latest research in OEHS!

Posters are available for viewing 9:00 a.m. Monday, May 20 through 1:00 p.m. Wednesday, May 22.

Poster Session Arrangers

- Matthew M. Dahm, NIOSH, Morgantown, WV.
- Aleks Stefaniak, NIOSH, Morgantown, WV.
- R. Kent Oestensad, University of Alabama, Birmingham, AL (Students).
- Lorraine Conroy, University of Illinois at Chicago, Chicago, IL (Students).
- Jim McGlothlin, Purdue University, West Lafayette, IN (Students).

PS 401

Poster Session

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

Author Attend Time: 10:00 a.m.–Noon

Aerosols

- **SR-401-01 Exposure to Black Carbon and Nanoparticles from Backyard Campfires.** T. Hogan, Northern Illinois University, DeKalb, IL.
- **SR-401-02 Field Evaluation of Sampling Bias due to Electrostatic Charge for Size-Fractionated Bioaerosol Sampling.** Y. Kuo, C. Tu, P. Ciou, Chung-hwa University of Medical Technology, Tainan, Taiwan.
- **SR-401-03 Historical Outdoor Airborne Asbestos Concentrations Associated with Emission Sources in the United States: A Review of Published and Unpublished Data.** A. Abelman, J. Pierce, M. Glynn, ChemRisk, LLC., Chicago, IL; S. Serrano, C. Ronk, D. Paustenbach, ChemRisk, LLC., San Francisco, CA.
- **SR-401-04 Characterization of a Nano-Aerosol Using a Portable Scanning Mobility Particle Sizer and Electron Microscopy.** A. Marty, Y. Hammad, University of South Florida, Tampa, FL.
- **SR-401-05 A Nanoparticle Generator Based on Corona Discharge.** C. Lin, S. Huang, W. Lin, C. Hsu, W. Kuo, C. Chen, National Taiwan University, Taipei, Taiwan.
- **SR-401-06 Expansion of the Performance Capabilities of the USF Inhalation Challenge Chamber.** L. Riley, L. Pieretti, S. Mlynarek, University of South Florida, Tampa, FL.
- **CS-401-07 A Puzzle of Acute Temporary Eye Irritation Among Plant Workers.** D. Bryant, C. Bacigalupo, Intrinsik Environmental Sciences, Mississauga, ON, Canada; P. Kelly, Teck, Trail, BC, Canada.

Biosafety and Environmental Microbiology

- **SR-401-08 Evaluation of Method of Control Indoor Environmental Bioaerosols.** C. Lai, M. Shu, C. Yang, Y. Wang, Chung Shan Medical University, Taichung, Taiwan.

Emerging Issues

- **SR-401-09 Occupational Exposures during 'Fume Events' in Airplanes.** J. Allen, J. Stewart, D. MacIntosh, J. McCarthy, Environmental Health & Engineering, Inc., Needham, MA.

Indoor Environmental Quality

- **SR-401-10 Distribution Characteristics of Airborne Bacteria in Poultry Buildings.** K. Kim, J. Paik, Catholic University of Pusan, Busan, Republic of Korea; H. Ko, Jeju Special Self-Governing Province, Jeju, Republic of Korea; Y. Roh, C. Kim, Yonsei University, Seoul, Republic of Korea.
- **SR-401-11 A Comparison of Reported Peak Concentrations of Diacetyl in the Workplace to Estimated Diacetyl Concentrations in Mainstream Cigarette Smoke.** J. Pierce, A. Abelman, L. Spicer, L. Johns, L. Roberts, H. Fritz, M. Glynn, ChemRisk, Chicago, IL; B. Finley, ChemRisk, San Francisco, CA.
- **SR-401-12 Characterization of Polycyclic Aromatic Hydrocarbon Emissions in the Particulate and Gas Phase from Smoldering Mosquito Coils Containing Various Atomic Hydrogen/Carbon Ratios.** T. Yang, H. Chung, Yuanpei University, Hsin Chu, Taiwan; T. Lin, National United University, Maioli, Taiwan.
- **SR-401-13 Variation of Indoor Air Quality in a New Apartment Building by Bake-Out.** J. Koo, The Catholic University of Korea, Seoul, Republic of Korea; S. Kim, Innoenvy Expert Community Co, Bucheon, Republic of Korea.

Laboratory Health and Safety

- **SR-401-14 Analysis of Historical Asbestos Exposures and Risk of Asbestos-Related Disease for Laboratory Workers Using Asbestos-Containing Laboratory Products.** W. Cyrs, M. McKinley, L. Weisenfluh, ChemRisk, San Francisco, CA.

Mold

- **CS-401-15 Mold Growth in a Commercial Building HVAC System.** C. Corpuz, LaCroix Davis LLC, Lafayette, CA; B. Heckman, LaCroix Davis LLC, Harrisburg, PA.

Nanotechnology

- **SR-401-19 Nanoparticle Exposures in Three Research Laboratories of Québec.** M. Debia, S. Weichenthal, A. Dufresne, Université de Montréal, Montreal, QC, Canada.
- **SR-401-17 Characterization of Airborne Nanoparticles using Four Different Methods.** M. Henderson, Y. Hammad, University of South Florida, Tampa, FL.
- **SR-401-20 Nanoparticle Leakage through Staple Punctures in N95 Single Use Filtering Facepiece Respirators.** D. Medina, Y. Hammad, University of South Florida, Tampa, FL.

- **CS-401-18 Emerging Issues Associated with the Use of Nanomaterials in Formulation and Use of Consumer Products: An Information Sharing Opportunity for the Nanotechnology Working Group.** S. Maberti, ExxonMobil, Houston, TX.
- **SR-401-16 A Survey on Understanding and Attitude Level of Safety and Health for handling Nanomaterials in Korea.** E. Chung, Occupational Safety and Health Research Institute, Incheon, Republic of Korea.

PS 402

Poster Session

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

Author Attend Time: 2:00 p.m.–4:00 p.m.

Engineering

- **CS-402-01 Proposed Improvements to ACGIH VS-99-07 Mortuary Table Design.** F. Demer, University of Arizona, Tucson, AZ.

Hazardous Chemicals

- **SR-402-02 Identification of Workers Exposed Concomitantly to Heat Stress and Chemicals.** R. Bourbonnais, ROH consultant, Laval, QC, Canada; J. Zayed, M. Lévesque, Université de Montréal, Montréal, QC, Canada; M. Busque, P. Duguay, G. Truchon, IRSST, Montréal, QC, Canada.

Industrial Hygiene General Practice

- **CS-402-09 Tablet Based Baseline Exposure Assessment Tool.** D. Decker, National Renewable Energy Lab, Golden, CO; D. Smith, TMSS Inc., Littleton, CO.
- **CS-402-07 Carbon Dioxide Exposure During Dry Ice Blasting For Mould.** S. Lombardo, B. Peprah, R. Quenneville, T. Harris Environmental Management Inc., Toronto, ON, Canada.
- **SR-402-03 A Comparison of Workday-Duration Occupational Exposures to Diacetyl to Estimated Exposures Associated with Cigarette Smoking.** L. Spicer, J. Pierce, M. Glynn, A. Abelman, L. Roberts, L. Johns, H. Fritz, ChemRisk, Chicago, IL; B. Finley, ChemRisk, New York, NY.
- **CS-402-04 Electronic Hand Soldering Bespoke Designed LEV.** A. Smith, ESIS Health, Safety & Environmental, Birmingham, United Kingdom.
- **CS-402-05 Case Study: Short Term Formaldehyde Exposure Variation with Work Practices.** R. Supples, Applied Improvement Technologies, LLC, Shelton, CT; B. Bethel, Sikorsky Aircraft, Inc, Stratford, CT.
- **CS-402-06 Diffusive Sampling Technique for the Identification of Indoor Pollution Sources and Possible Reasons for Complaints.** D. Cottica, C. Boaretto, C. Cocheo, E. Grignani, P. Sacco, L. Zaratini, Fondazione Salvatore Maugeri, Padova, Italy; M. Tommasini, Azienda Provinciale per i Servizi Sanitari, Trento, Italy.
- **CS-402-08 Formaldehyde Exposures in a Newly-Constructed Gross Anatomy Laboratory.** F. Demer, University of Arizona, Tucson, AZ.
- **SR-402-10 The Suitability of Diffusive Samplers**

for Low Level Measurements of Hazardous Substances specified in ATSDR Minimal Risk Levels. C. Kuhlman, L. Coyne, SKC, Inc., Eighty Four, PA.

Sampling and Laboratory Analysis

- **SR-402-11 Validation of a Sampling Method for the Preservation of Chromium (+6) in Airborne Samples.** A. Rule, J. Mihalic, Johns Hopkins University, Baltimore, MD.
- **SR-402-12 Collecting Low Concentrations of Mixed Organic Solvents: Active vs Passive Sampler.** H. KIM, S. Kang, The Catholic University of Korea, Seoul, Republic of Korea.
- **CS-402-13 Comparison of OSHA Method 47 vs an Alternative Method for Methylene Bisphenyl Isocyanate During Spraying of Truck bed Liners.** J. Kenny, ESIS Environmental Health Lab, Cromwell, CT; J. Lohkamp, ESIS Health, Safety and Environmental, Dallas, GA.
- **SR-402-14 Assessment of Airborne Furan Indoors By Solid Phase Microextraction.** L. Lin, I. Wang, H. Lin, H. Chang, S. Tsai, National Taiwan University, Taipei, Taiwan; A. Tsai, Y. Tseng, Morrison Academy, Taichung, Taiwan.
- **CS-402-15 Comparison of Abrasive Blasting Sampling Methods.** D. Ceballos, D. Sylvain, M. Kiefer, NIOSH, Cincinnati, OH.
- **SR-402-16 Field Comparison of VOCs Sampling by Adsorbent Tubes and Canisters Followed with Thermal Desorption Analysis in Petrochemical Plants.** C. Chang, J. Wu, W. Chu, Chang Jung Christian University, Tainan, Taiwan; Y. Hua, T. Lin, National United University, Miaoli, Taiwan; T. Lin, Chang Jung Christian University, Tainan, Taiwan.
- **SR-402-17 Preparation of Lead Proficiency Testing Material for the ELPAT Program.** D. Binstock, G. Ross, RTI, RTP, NC.
- **SR-402-18 Effect of Iron Oxide Interference on Quantitative Quartz Analysis by X-ray Diffraction.** K. Kaelin, D. MacDuff, A. Davis, S. Anderson, Galson Laboratories, E. Syracuse, NY.
- **SR-402-19 Analytical Methods for Determination of Compliance with OEL Values Established in Poland in 2010-12.** J. Gromiec, S. Brzezniak, W. Wesolowski, M. Kucharska, Nofer Institute of Occupational Medicine, Lodz, Poland.
- **SR-402-20 Measurement of Macrocyclic Trichothecene Mycotoxins in Office Dust Using Gas-chromatography/Tandem Mass-spectrometry: The Influence of Potential Matrix Effects.** R. Saito, University of Texas at Tyler, Tyler, TX; R. Lebof, B. Green, J. Park, NIOSH, Morgantown, WV.

PS 403

Poster Session

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

Author Attend Time: 10:00 a.m. - Noon

Biological Monitoring

- **SR-403-01 The Relationship between Exposure to Benzene and the Excretion of Urinary trans, trans-muconic Acid in Petrochemical Factory Turnaround Process Workers.** J. Roh, S. Lee, J. Won, C. Kim, D. Kim, Yonsei University College of Medicine, Seoul, Republic of Korea.

Exposure Assessment Strategies

- **CS-403-02 Case Study — Modeled Carbon Dioxide (CO₂) Concentrations Using AIHA IH Mod Program Versus Field Results — Dry Ice Use in Refrigerated Trailers.** H. Frazer, ESIS Inc., Health, Safety & Environmental Services, Philadelphia, PA.
- **CS-403-03 Presence Of Beryllium (be) And Evaluation Of Workers' Exposure To Be In Quebec (canada) Compagnies (2001-2012).** C. Lafor-tune, Agence de la santé et des services sociaux de Laval, Laval, QC, Canada; P. Pelletier, Agence de la santé et des services sociaux de Montérégie, Longueuil, QC, Canada.
- **CS-403-04 Why the Clerical Application of TLVs may not Protect Workers — A Case Study.** J. Elias, Elias Occupational Hygiene Consulting, Winnipeg, MB, Canada; A. Reineke, University of Manitoba, Winnipeg, MB, Canada.
- **SR-403-05 Use the ECETOC TRA Model to Estimate Exposure to TDI in the Foaming Process.** M. Kupczewska-Dobacka, S. Czerczak, Nofer Institute of Occupational Medicine in Poland, Lodz, Poland.

Ionizing Radiation

- **SR-403-06 An Independent Screening-Level Evaluation of Early Airborne Releases of Plutonium from DP West Site at the Los Alamos National Laboratory.** M. Le, E. Donovan, M. Folan, S. Gaffney, ChemRisk, LLC, San Francisco, CA; K. Devlin, ChemRisk, LLC, Boulder, CO.
- **CS-403-07 Naturally Occurring Radioactive Material at Natural Gas Processing Facilities.** M. Ndonga, E. Trudell, Encana Oil & Gas (USA), Inc., Denver, CO.

Legal, Regulatory, Guidelines, Standards

- **SR-403-08 Evolution of Warnings and Labels on Encapsulated Asbestos-Containing Products (1930-1990).** L. Vishnevskaya, K. Thuett, W. Cyr, P. Chapman, D. Paustenbach, B. Finley, ChemRisk, San Francisco, CA.

Noise

- **CS-403-09 An Investigation of Potential Intervention Strategies Involving High Noise Sources Within The Department of Defense.** R. Fischer, Noise Control Engineering Inc., Billerica, MA; G. Burdge, Concurrent Technologies Corporation, Lemoyne, PA; J. Erdman, E. Benchoff, Naval Safety Center Liaison Office, Washington, DC.

- **SR-403-10 Noise Exposure Assessment on an Onshore Gas Platform.** A. Segueni, M. Debia, A. Vyskocil, A. Dufresne, Université de Montréal, QC, Canada.
- **SR-403-11 Noise Exposure Levels for Trade Workers at a University.** A. Reineke, University of Manitoba, Winnipeg, MB, Canada.
- **CS-403-12 Noise Exposures in School Music Classes and Marching Band Rehearsals.** L. Chen, S. Brueck, NIOSH, Cincinnati, OH.

Real-Time Detection

- **SR-403-13 Short Term Occupational Exposures to Carbon Monoxide in Car Inspection Workers.** J. Jang, OSHRI for KOSHA, Incheon, Republic of Korea.

Risk Assessment and Management

- **SR-403-14 An Overview of Fatal Accidents in Confined Spaces in Quebec from 1998 to 2011.** A. Bahloul, D. Burlet-Vienney, IRSST, Montreal, QC, Canada; Y. Chinniah, Polytechnique Montreal, Montreal, QC, Canada.
- **CS-403-15 Mercury Emissions from a Synthetic Gym Floor: Risk-based Assessment, Flux Measurements, Control and Verification during Removal.** W. Wade, R. Lamothe, T. Minegishi, D. Pritchett, L. Zwack, B. Baker, J. Stewart, J. Allen, Environmental Health and Engineering, Inc., Needham, MA; Z. Schneider Graham, University of Massachusetts, Boston, MA.
- **SR-403-16 Proposals to Introduce New Occupational Exposure Limits in Poland in 2012.** S. Czerczak, M. Kupczewska-Dobacka, Nofer Institute of Occupational Medicine, Lodz, Poland.
- **SR-403-17 Research on the Potential Exposure to Metals in Laundered Shop Towels.** L. Beyer, G. Greenberg, B. Beck, Gradient, Cambridge, MA.
- **SR-403-18 Analysis of the Presence of Tremolite in Chrysotile-Containing Joint Compounds in the United States.** W. Cyr, ChemRisk, San Francisco, CA; E. Williams, ChemRisk, Chicago, IL.

PS 404

Poster Session

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

Author Attend Time: 1:00 p.m. - 3:00 p.m.

Ergonomics

- **SR-404-01 The Effect of Vibration on Upper Limb Muscular Load in Simulated Operation of Hand-Held Electric Drill.** S. Lu, Y. Chiu, Chung Shan Medical University, Taichung, Taiwan; C. Lee, Chaoyang University of Technology, Taichung, Taiwan.
- **SR-404-02 Biomechanical Analysis of Upper Limbs for Lifting Tasks with Unbalanced Load Distribution.** C. Lee, P. Sung, Chaoyang University of Technology, Taichung, Taiwan; S. Lu, Chung Shan Medical University, Taichung, Taiwan.

- **CS-404-03 Case Study: PCM Equipment Modifications to Correct for an MSD from Fiber Counting.** P. Stanch, S. Keppta, D. Fadner, S. Goldberg, NASA Johnson Space Center, Houston, TX.
- **SR-404-04 Effects of Different Surfaces on Biomechanical Loading of the Shoulder and Hand While Pushing Construction Carts.** Y. Lin, Chung Shan Medical University, Taichung, Taiwan.
- **SR-404-05 Acceptability of Anti Vibration Riveting Guns: Perception of Workers.** R. Buitrago, M. Baillargeon, C. Lechasseur, M. Debia, A. Dufresne, Université de Montreal, Montreal, QC, Canada.

Health Care

- **SR-404-06 Assessing Particulate Size Distribution in the Hospital Setting.** M. Pannell, US Army Northern Region Medical Command, Springfield, VA; M. Jones-Lewis, Charlie Norwood Veteran's Administration Medical Center, Augusta, GA.
- **CS-404-07 Evaluation of Infection Control Techniques During On-Going Renovation of In-Patient Space Involving Expansion and Update of a Teaching Hospital Facility in Houston, Texas.** J. Koehn, Jan Koehn, Inc., Houston, TX.
- **CS-404-08 Qualitative Risk Assessment Identifies a Surprising Allergic Reaction in Healthcare Workers.** M. Heaney, Liberty Mutual, Bedford, NH.

Nonionizing Radiation

- **SR-404-09 An Assessment of Perceptions and Practices on Sun Protection among Farmers Attending a Regional Farm Show in North Carolina.** G. Kearney, S. Lea, J. Balanay, Q. Wu, H. Von Hollen, K. Sheppard, J. Defazio, East Carolina University, Greenville, NC; R. Tutor, NC Agromedicine Institute, Greenville, NC.

Occupational and Environmental Epidemiology

- **SR-404-10 Evaluation of the Occupational Health Indicator for Work-Related Low Back Disorder Hospitalizations and its Potential for Comprehensive Surveillance of Work-Related Low Back Disorders.** S. Slavova, T. Bunn, University of Kentucky, Lexington, KY.

Protective Clothing and Equipment

- **SR-404-14 Particle Penetration through Protective Clothing Materials: Passive vs Active Sampling.** P. Gao, T. Rozzi, L. Barkand, NIOSH, Pittsburgh, PA; P. Jaques, URS Corporation, Aiken, SC.
- **SR-404-12 Identify the Leachable Phthalate Esters in Protective Gloves by Disinfectants.** Y. Lin, Fu Jen Catholic University, New Taipei City, Taiwan; M. Chen, Institute of Occupational Safety and Health, New Taipei City, Taiwan.
- **CS-404-13 Nitrile Gloves Pose Potential Positive Interference to Airport Screenings.** M. Strange, ESIS Health Safety & Environmental Services, Sonora, CA.

- **CS-404-11 A Real-Time Personal Heat Stress/Heat Strain Monitoring System.** P. Sung, C. Lee, Chaoyang University of Technology, Taichung City, Taiwan; H. Chen, National Taipei University of Technology, Taipei City, Taiwan.

Respiratory Protection

- **SR-404-15 Development of a Control Banding Approach for Respirator Selection against Bioaerosols.** J. Lavoie, Y. Cloutier, G. Marchand, IRSST, Montréal, QC, Canada; E. Neesham-Grenon, M. Debia, Université de Montreal, Montréal, QC, Canada.

Stewardship/Sustainability

- **SR-404-17 Applying the Hierarchy of Controls to Integrate Occupational Safety and Health with Green Chemistry and Sustainability Principles.** L. McKernan, P. Schulte, A. Okun, G. Dotson, T. Lentz, C. Geraci, NIOSH, Cincinnati, OH; D. Heidel, Bureau Veritas North America, Inc., Edison, NJ; C. Branche, NIOSH, Washington, DC.
- **CS-404-21 Product Stewardship: A Successful Part of an Environmental Performance Agreement.** P. Snodgrass, Unifrax Corporation, Niagara Falls, NY; D. Smith, Environment Canada, Gatineau, QC, Canada.

- **SR-404-19 A Cross-Sectional Analysis of Reported Corporate Environmental Sustainability Practices.** T. Ferracini, ChemRisk, LLC, Boulder, CO.
- **CS-404-16 Engineering Treatment Options for Stewardship and Management of Industrial and Mining Wastewaters.** J. McKernan, B. Butler, US EPA, Cincinnati, OH; A. Levine, Battelle Memorial Institute, Columbus, OH.
- **CS-404-20 Predicting Chemistries Targeted for Deselection: A Case Study with Triclosan.** T. Ferracini, ChemRisk, LLC, Boulder, CO.
- **SR-404-18 Beyond the Standards: Comparing Sustainability Reports of Consumer Products Companies.** A. Gauthier, T. Kingsbury, ChemRisk, San Francisco, CA; T. Ferracini, ChemRisk, Boulder, CO; J. Panko, ChemRisk, Pittsburgh, CA.

PS 405

Poster Session Undergraduate and Graduate Students

Wednesday | 9:00 a.m.-1:00 p.m.

Author Attend Time: 10:00 a.m.-Noon

Student awards presented at 12:30 p.m.



The CEL-712 Microdust Pro is a data logging instrument ideal for real-time detection of airborne dusts and aerosols. Its large graphical color LCD instantly displays concentration levels over time to accurately identify events and trends.

- Real-time display on color LCD
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Hours

Monday, May 20, 9:00 a.m.–5:30 p.m.

Tuesday, May 21, 9:00 a.m.–3:00 p.m.

Wednesday, May 22, 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.

Tuesday Cafe & Croissants

Meet with exhibitors while enjoying coffee and a pastry.

Passport to Prizes

Sponsored by Industrial Scientific Corp.

Passport Prize Booth #2209

Have your passport stamped by participating exhibitors, and drop your entry at the Prize Booth #2209 by noon, Wednesday. Winning names will be drawn at 12:30 p.m. on Wednesday. The Grand Prize is a trip to AIHce 2014 in San Antonio, Texas. 2nd Prize is \$1,000.

Prize Drawing Ticket

iPad Prize Booth #425

Full registrants receive a ticket to enter to win one of 4 iPads. Drawings will be done after the show closes on Tuesday, May 21, and winners will be notified by email and told where they can pick up their prizes.



Special Exhibit

Clandestine Drug Lab Exhibit

Provided by AIHA's Clan Lab Working Group
Booth #2023

Clandestine Laboratory Working Group will display a mock clandestine drug lab that focuses on hazards associated with the production of methamphetamine and indoor marijuana grow operations. Representatives from Sûreté du Québec office will be on hand to demonstrate how they approach, monitor, and mitigate health hazards associated with clandestine drugs, and have on display their CBRNE/Clan Lab Trailer.

Expo Theater: Product Demos and Presentations

Monday, May 20

10:00 a.m.

Introduction to Single Gas DualSense™ Technology, Industrial Scientific Corporation

10:30 a.m.

Remote WiFi Access to Portable IAQ, LEED 3.2, Toxic Gas Monitors, GrayWolf Sensing Solutions

11:30 a.m.

TurtleSkin CP Neon – the Nimble Cut & Puncture Glove, Warwick Mills – Turtleskin Noon

Achieving Hazcom 2012 and Global GHS Compliance Using ExESS® SDS Authoring Automation, Lisam Systems

12:30 p.m.

3M Eyewear Fit System – A New Tool to Help Ensure That Properly Fitting Eyewear Are Incorporated Into Your Eye Safety Program, 3M Personal Safety Division

1:00 p.m.

EVAHL PAPER for Hazardous Classified Locations, Bullard

1:30 p.m.

A Passive Sampling Solution for the New Nitrogen Dioxide TLV, SKC Inc.

Tuesday, May 21

9:30 a.m.

Dräger's X-dock Modular Test System, Dräger

10:00 a.m.

Galson Laboratories' Hydrofracking Kit, Galson Laboratories

10:30 a.m.

Rapid Assessment of Bulk Materials for Microbial Contamination, Mycometer, Inc.

11:00 a.m.

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

11:30 a.m.

Medgate GX2 – Advanced Industrial Hygiene Software, Medgate, Inc.

Noon

Portable Aerosol Mobility Spectrometer Makes On-site Analysis Possible, Kanomax USA Inc.

12:30 p.m.

New Generation Real-time Dust Monitor with Optical Cell Calibration, Casella CEL Inc.

1:00 p.m.

Introducing a New Multi-gas Detector with a 2 Month Continuous Run Time and 6 Month Recommended Calibration Frequency, Gas Clip Technologies, Inc.

1:30 p.m.

Gas Detection Fleet and Data Management with the Galaxy® GX2, MSA

Wednesday, May 22

9:30 a.m.

AtlasWork™: Reduce Injuries and Losses By Better Managing Work Requirements, Risk and Restrictions, Atlas Ergonomics

10:00 a.m.

Prevent An Accident From Becoming An Incident: How to Reduce Risk and Increase Safety with Wireless Gas Detectors, RAE Systems

10:30 a.m.

Real-Time Lockout-Tagout Status and Program Audit Tool: ESC Provides Solutions for LOTO Programs, ESC Services, Inc.

11:00 a.m.

Good Lab Practices with Powder Handling in an OEL 3 and 4 Environment, Flow Sciences, Inc.

Noon

Using the Latest Industry Guidelines to Assess the Required Minimum Volumetric Rate Capabilities of Chemical Fume Hoods, Labconco Corporation

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Passport to Prizes, Booth 1309

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MSA/AIHA Reception, Booth 1101



Scientific Analytical Institute, Inc.
Cyber Café and Wireless, Booth 804

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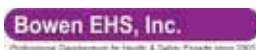
ALS Environmental
Standing Sign, Row 1600
Aisle Sign, Booth 1609



American Board of Industrial
Hygiene
Standing Sign,
Booth 600



Assay Technology
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Booth 800



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Casella USA
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Sensidyne, LP
Lanyards,
Booth 1009



Supelco
Standing Signs,
Booth 1910



SiteHawk
Passport to Prizes,
Booth 915



Thermo Scientific –
Air Quality Instruments & Portable XRF
Analyzers, Row 1500 Aisle Sign,
Booth 1501



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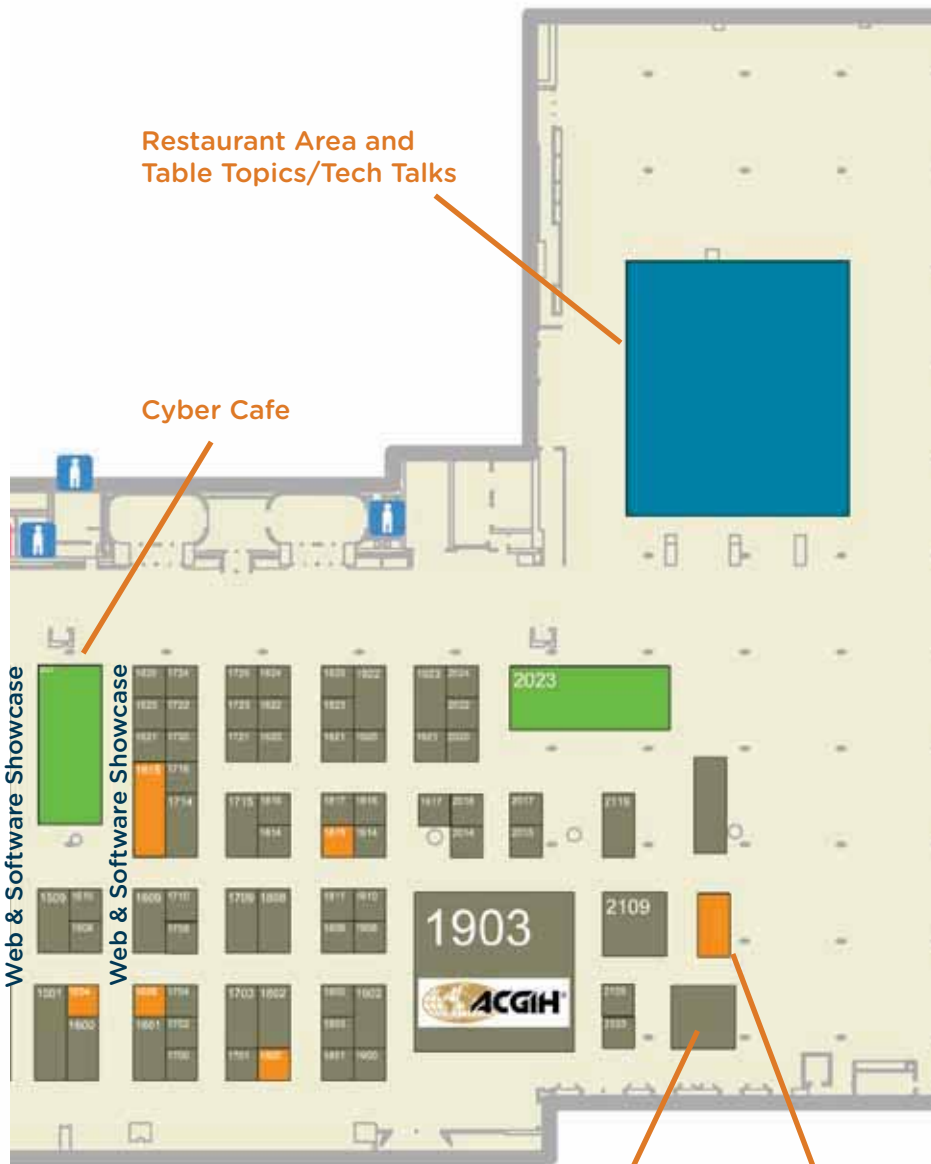
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Passport
Participants

Ticket Drop-off for iPad Drawing
Booth #425

Expo Theater





Expo Hours

MONDAY, MAY 20

9:00 AM – 5:30 PM

TUESDAY, MAY 21

9:00 AM – 3:00 PM

WEDNESDAY, MAY 22

9:00 AM – 1:30 PM



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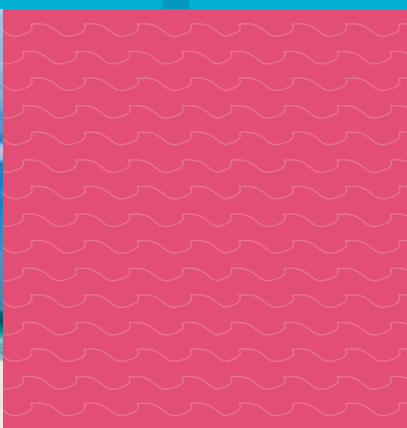
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A

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Tuesday, May 21, 2:00 p.m.–4:00 p.m., Palais, 523a

Communication and Training Methods Committee

Tuesday, May 21, 10:00 a.m.–Noon, Palais, 523a

Computer Applications Committee

Monday, May 20, 3:30 p.m.–5:30 p.m., Palais, 521a

Confined Spaces Committee

Wednesday, May 22, 3:30 p.m.–5:30 p.m., Westin, Beaver Hall, 8th Floor

Construction Committee

Wednesday, May 22, 9:00 a.m.–Noon, Westin, Palais, 8th Floor

Consultants Special Interest Group

Monday, May 20, 10:00 a.m.–Noon, Palais, 520a

Continuing Education Committee

Monday, May 20, 2:00 p.m.–4:00 p.m., Palais, 521b

Control Banding Working Group

Tuesday, May 21, 2:00 p.m.–4:00 p.m., Palais, 523b

E

Engineering Committee

Monday, May 20, 1:00 p.m.–3:00 p.m., Palais, 523a

Engineering Industry Special Interest Group

Tuesday, May 21, 10:00 a.m.–Noon, Palais, 523b

Environmental Issues Committee

Monday, May 20, 3:30 p.m.–5:30 p.m., Palais, 522b

Environmental Issues Special Interest Group

Tuesday, May 21, 2:00 p.m.–4:00 p.m., Palais, 521b

Ergonomics Committee

Monday, May 20, 3:30 p.m.–5:30 p.m., Palais, 523a

Exposure Assessment Strategies Committee

Monday, May 20, 10:00 a.m.–Noon, Palais, 524c

F

Fellows Special Interest Group

Wednesday, May 22, 4:00 p.m.–6:00 p.m., Sheraton, Drummond Centre, Level 3

Finance Committee

Monday, May 20, 2:00 p.m.–4:00 p.m., Palais, 522a

Future Leaders and Young Members Reception (by invitation)

Sunday, May 19, 7:00 p.m.–10:00 p.m., NEWTOWN, 1476 rue Crescent

G

Green Building Working Group

Wednesday, May 22, 3:30 p.m.–5:30 p.m., Westin, St. Helene, 8th Floor

Green Council

Wednesday, May 22, Noon–1:00 p.m., Westin, St. Helene, 8th Floor

Guideline Foundation

Monday, May 20, 11:00 a.m.–1:00 p.m., Palais, 445

H

Healthcare Working Group

Thursday, May 23, 1:00 p.m.–3:00 p.m., Palais, 512g

I

Incident Preparedness and Response Working Group

Monday, May 20, 10:00 a.m.–Noon, Palais, 523b

Indigo Council

Monday, May 20, Noon–1:00 p.m., Westin, Viger, 8th Floor

Indoor Environmental Quality Committee

Monday, May 20, 1:00 p.m.–3:00 p.m., Palais, 524a

Indoor Environmental Quality Special Interest Group

Monday, May 20, 3:30 p.m.–5:30 p.m., Palais, 525

International Affairs Committee

Monday, May 20, 2:00 p.m.–6:00 p.m., Sheraton, Drummond East, Level 3

International Reception (by invitation)

Monday, May 20, 6:30 p.m.–8:00 p.m., Sheraton, Salle de bal Centre, Level 4

Ionizing Radiation Committee

Monday, May 20, 1:00 p.m.–3:00 p.m., Palais, 521a

J

Joint Industrial Hygiene Ethics Education Committee

Sunday, May 19, 7:00 p.m.–9:00 p.m., Sheraton, Salon 4, Level 2

L

Laboratory Health and Safety Committee

Monday, May 20, 3:30 p.m.–5:30 p.m., Palais, 523b

Law Committee

Monday, May 20, 10:00 a.m.–Noon, Palais, 522b

M

Management Committee

Monday, May 20, 3:30 p.m. – 5:30 p.m., Palais, 524a

Minority Special Interest Group

Tuesday, May 21, 10:00 a.m. – Noon, Palais, 525

N

Nanotechnology Working Group

Monday, May 20, 3:30 p.m. – 5:30 p.m., Palais, 524b

Noise Committee

Wednesday, May 22, 1:00 p.m. – 3:00 p.m., Westin, Palais, 8th Floor

Nonionizing Radiation Committee

Wednesday, May 22, 10:00 a.m. – Noon, Westin, Beaver Hall, 8th Floor

O

Occupational and Environmental Epidemiology Committee

Tuesday, May 21, 10:00 a.m. – Noon, Palais, 521a

Occupational and Environmental Medicine Committee

Tuesday, May 21, 10:00 a.m. – Noon, Palais, 521b

Oil and Gas Working Group

Monday, May 20, 10:00 a.m. – Noon, Palais, 524a

Orange Council

Wednesday, May 22, 12:15 p.m. – 1:15 p.m., Westin, McGill, 8th Floor

P

Past Presidents' Brunch (by invitation)

Wednesday, May 22, 9:30 a.m. – 11:00 a.m., Sheraton, Salon 1, Level 2

Permanent Conference Committee

Wednesday, May 22, 4:00 p.m. – 6:00 p.m., Palais, 512f

Pharmaceutical Round Robin Committee

Wednesday, May 22, 8:00 a.m. – 9:30 a.m., Palais, 512f

President's Reception (by invitation)

Wednesday, May 22, 6:30 p.m. – 8:00 p.m., Sheraton, Salle de bal West, Level 4

Protective Clothing and Equipment Committee

Monday, May 20, 10:00 a.m. – Noon, Palais, 522c

Publications Committee

Tuesday, May 21, 10:30 a.m. – 11:30 a.m., Palais, 512e

R

Real-Time Detection Systems Committee

Monday, May 20, 1:00 p.m. – 3:00 p.m., Palais, 524b

Red Council

Tuesday, May 21, Noon – 1:00 p.m., Westin, Palais, 8th Floor

Respiratory Protection Committee

Tuesday, May 21, 10:00 a.m. – Noon, Palais, 524b

Risk Assessment Committee

Wednesday, May 22, 1:00 p.m. – 3:00 p.m., Westin, Beaver Hall, 8th Floor

S

Safety Committee

Tuesday, May 21, 2:00 p.m. – 4:00 p.m., Palais, 524b

Sampling and Laboratory Analysis Committee

Monday, May 20, 3:30 p.m. – 5:30 p.m., Palais, 524c

Social Concerns Committee

Monday, May 20, 10:00 a.m. – Noon, Palais, 524b

Stewardship 2013 Networking Reception

Sunday, May 19, 5:30 p.m. – 7:00 p.m., Sheraton, Salon 3, Level 2

Stewardship and Sustainability Committee

Tuesday, May 21, 10:00 a.m. – Noon, Palais, 524c

Students and Early Career Professionals Mentoring Program Networking Event

Monday, May 20, 6:00 p.m. – 8:00 p.m., Les Brasseurs, 105 rue St. Paul est

Students and Early Career Professionals Committee

Tuesday, May 21, 2:00 p.m. – 4:00 p.m., Palais, 524c

T

Toxicology Committee Meeting

Tuesday, May 21, 2:00 p.m. – 4:00 p.m., Palais, 525

V

Value Strategy Committee of the Academy

Monday, May 20, 1:00 p.m. – 3:00 p.m., Palais, 522b

Violet Council

Tuesday, May 21, 6:30 a.m. – 7:30 a.m., Westin, Palais, 8th Floor

Volunteer Group Chairs Meeting

Thursday, May 23, 8:30 a.m. – 10:00 a.m., Palais, 512g

Volunteer Group Secretaries Orientation Meeting

Thursday, May 23, 10:00 a.m. – 11:30 a.m., Palais, 512g

Volunteer Recognition Ceremony and Reception

Tuesday, May 21, 5:30 p.m. – 7:00 p.m., Fairmont, Joliet

Y

Yellow Council

Tuesday, May 21, 12:30 p.m. – 1:30 p.m., Westin, Viger, 8th Floor

AIHA Registry Programs®

SME Team Leader Meeting

Sunday, May 19, 4:00 p.m. – 6:00 p.m., Westin, St. Helene, 8th Floor

SME Team Meeting: SDS and Label Authoring

Monday, May 20, 10:00 a.m. – Noon, Palais, 512d

SME Team Meeting: IAQMP (Existing Buildings)

Monday, May 20, 10:00 a.m. – Noon, Palais, 512h

SME TEAM Meeting: Exposure Decision Analysis

Tuesday, May 21, 10:00 a.m. – Noon, Palais, 512d

SME Team Meeting: IAQMP (New Construction)

Tuesday, May 21, 10:00 a.m. – Noon, Palais, 512h

SME Team Meeting: 4-Gas/PID

Wednesday, May 22, 1:00 p.m. – 3:00 p.m., Palais, 512d

AIHA Local Sections

Local Sections Council Business Meeting

Tuesday, May 21, 1:30 p.m. – 3:30 p.m., Palais, 710b

Local Sections Officers Training

Thursday, May 23, 9:00 a.m. – 10:00 a.m., Palais, 512d

Student Local Sections Council Business Meeting

Tuesday, May 21, 11:00 a.m. – 1:00 p.m., Palais, 512b

AIHF

Board of Trustees Meeting

Tuesday, May 21, 3:30 p.m. – 5:30 p.m., Sheraton, Salon 6, Level 3

Recognition Reception (by invitation)

Sunday, May 19, 6:00 p.m. – 7:00 p.m., NEWTOWN, 1476 rue Crescent

JOEH

Editorial Review Board Meeting

Sunday, May 19, 7:00 p.m. – 9:00 p.m., Sheraton, Salon 1, Level 2

JOEH LLC Board Meeting

Tuesday, May 21, 2:00 p.m. – 4:00 p.m., Sheraton, Salon 5, Level 2

ACGIH®

Board of Directors Meeting

Sunday, May 19, 8:00 a.m. – 4:00 p.m., Sheraton, Salon 5, Level 2

FOHS Board of Trustees Meeting

Monday, May 20, 10:30 a.m. – Noon, Palais, 512b

Membership Reception and Annual Meeting of the Membership

Sunday, May 19, 6:00 p.m. – 7:30 p.m., Sheraton, Drummond West, Level 3

San Antonio, TX + May 31 - June 5 + AIHce2014.org

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CALL FOR POSTERS

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